The Architects' JOURNAL for August 21, 1958

ARCHITECT



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contents

every issue does not necessarily contain all these contents, but they are the regular features which continually recur

COMMENTIEWS and

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WRRENT BUILDING

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★ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to Ig one week, Ih to Z the next. In all cases where the town is not of abbreviations of Government Departments and Societies and Committees mentioned the word LONDON is implicit in the address.

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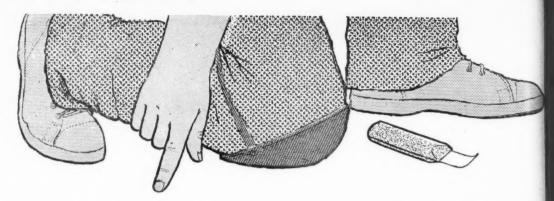
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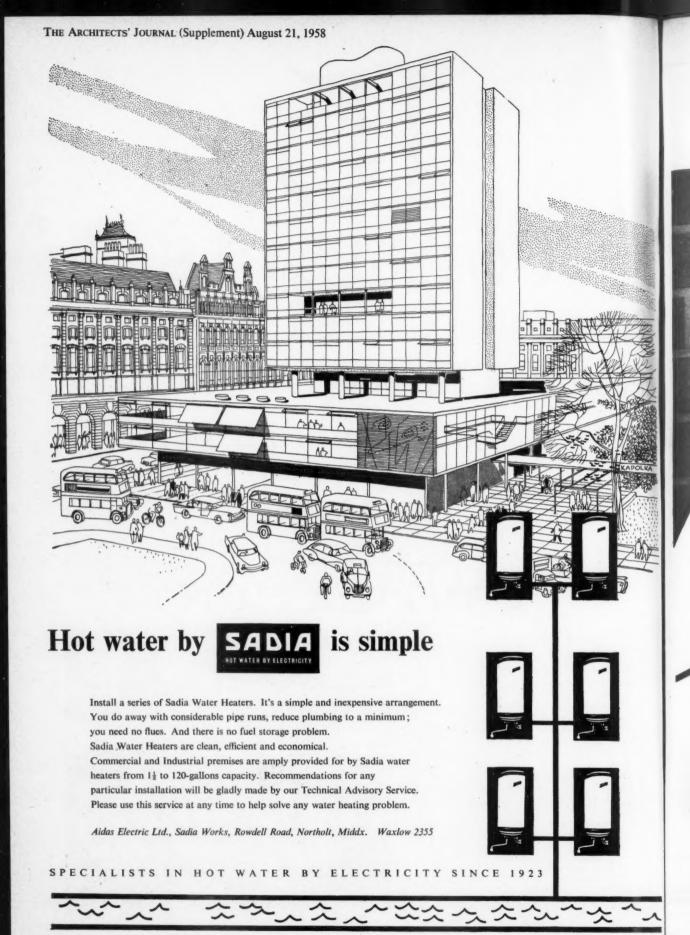


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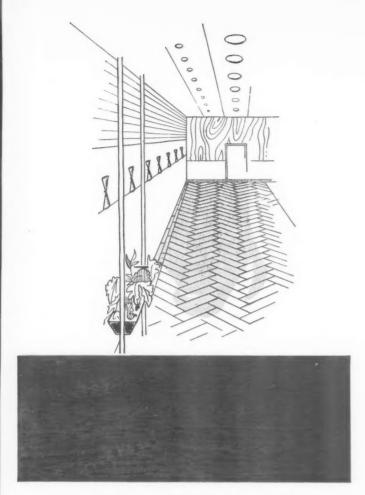
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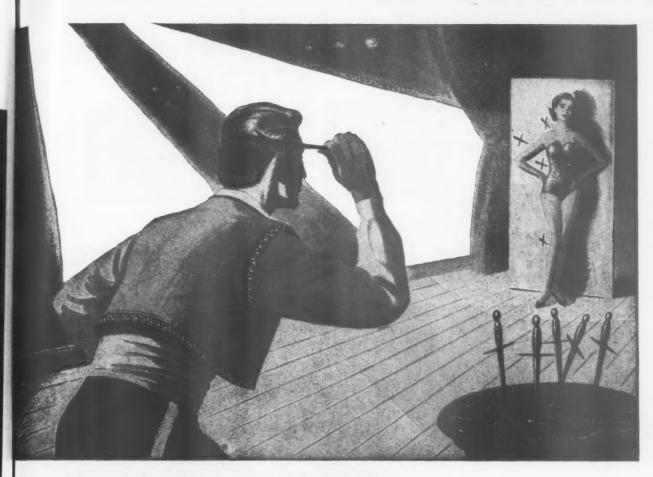
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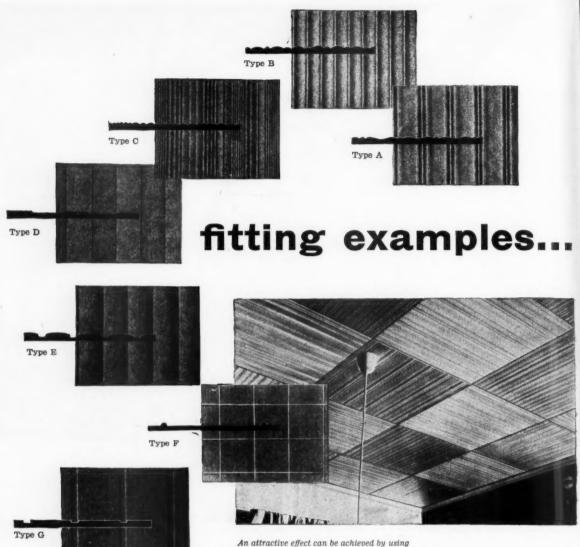
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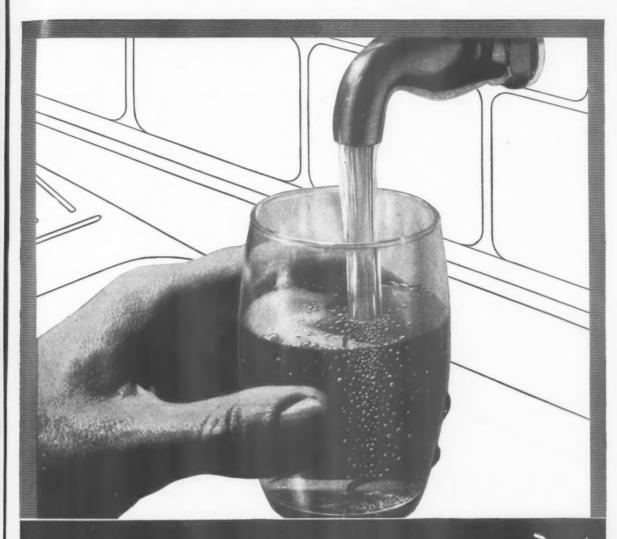
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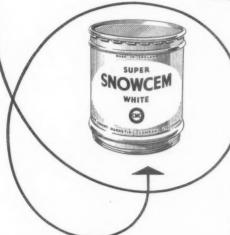
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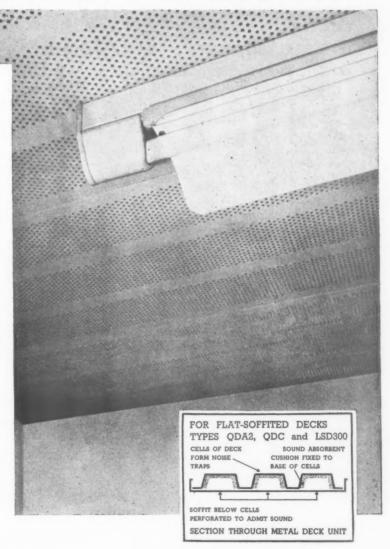
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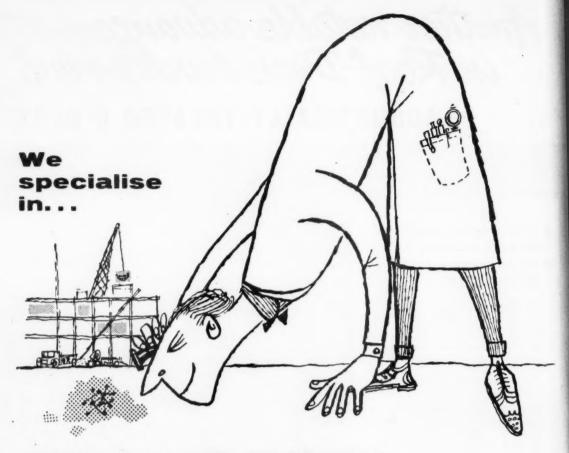
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monthly review by WILLIAMS & WILLIAMS

SPEEDY DELIVERY, SPEEDY ERECTION WIN CONTRACT FOR 'ALUMINEX' PATENT GLAZING

The big Pirelli factory at Burtonon-Trent required a massive new extension. The new building would house many new machines. But it was also intended to transfer the very heart of the factory to the new building. Heavy machinery, vital to the flow of production, was involved in the move. Speed was of the essence.

The speed and simplicity of erection of 'Aluminex' patent glazing commended itself to the Architects. And that was one of their reasons for selecting 'Aluminex' for the roof and sidewall glazing. Williams & Williams quoted only ten weeks delivery from approval of drawings. And this time was short enough to enable northlight slopes to be cladded as soon as the steelwork was sufficiently advanced.

The price was naturally an important factor further affecting the decision as to choice of materials. The extremely competitive prices quoted for 'Aluminex' clinched the matter.

Although mechanical roof extractors were provided for general ventilation, in certain areas in the factory, where excessive heat was to be generated, additional provision had to be made for rapid dissipation of this heat. This was accomplished by the introduction of large areas of opening northlight glazing operated by electrically controlled Teleflex gear. It was also felt by the clients that the ability to see a clear opening in the roof had a psychologically beneficial effect on the operatives' morale. The good natural lighting achieved throughout the new extension has been greatly welcomed by the staff.

LARGEST CURTAIN WALL INSTALLATION IN FAR EAST IS 'WALLSPAN'

The new American International Assurance building is the only structure of its kind in the Far East. Its unique architectural features coupled with local building ordinances and subsoil conditions necessitated many innovations, especially in materials.

The building's reinforced concrete frame is supported on concrete piles which were driven deep into the muddy swamp that was once Singapore's sea frontage! Far beneath the building was unearthed the remains of the old seawall, built about 1843. The 2-story pediment is faced with sun-absorbing glass, marble and granite in contrast to the 10-story tower block clad in dark-grey anodized aluminium 'egg-crate' curtain wall, using a high-silicon content aluminium alloy.

The ground floor, a full quarter acre, is occupied entirely by gardens-partly open, partly glass-enclosed; an entrance lobby with two walls of glass; and offstreet parking concealed from the lobby by a marble wall. The second story not only covers the entire building site but projects over the pavement as well, providing shade and comfort for pedestrians and making the exotic garden a part of the street scene. Faced with granite, this story provides a broad terrace on three sides of the main tower and carries the landscaping to the third floor level by elaborate plantings along its outer edges.

The gleaming 10-story tower is clad from top to bottom by an unusual and original application of 'Wallspan'. It takes the form of decorative aluminium louvres which, fixed in place both vertically and horizontally, skilfully shield the interior from direct rays of the tropical sun but allow all floors an ample supply of natural daylight. No part of any tower floor is more than 24 feet from a window, and only two columns break into working floor space.

Topping the slender tower is a practically 'weightless' 7-room penthouse, complete with kitchen, baths and large terrace. Extremely light walls are obtained by the use of styrofoam-the white synthetic sponge used in floral decorations. The styrofoam sheets are held in place by 'Wallspan' members.

INTERIOR OF MODERN LABORATORY IS ROFTEN MODULAR PARTITIONING

The laboratory is one of many departments of this new Vickers-Armstrongs factory that is tastefully segmented by Roften Modular Partitioning. The colour scheme, selected from the Roften range of 13 standard colours, is black and cream. Black pilasters and skirting; cream infill panels.

Vickers were greatly impressed by the robust construction and superb finish. And they particularly liked Roften's easy interchangeability. All components are made to the finest tolerances, absolute precision of steel parts is ensured by cold-rolling method of manufacture. Complete demountability and interchangeability are very necessary in such a rapidly expanding factory. Indeed, change of office layout is always on the cards.

In those offices where it was felt that undue noise would be distracting to the occupants, double glazing was used with highly efficient results. To supplement the draughtproofing at door jambs and to reinforce the insulation where absolute quiet was demanded, proprietary extruded aluminium and rubber thresholds are fitted.

HEADLINE' HOUSE HAS STANDARD METAL WINDOWS BY **WILLIAMS & WILLIAMS**

The deeper than usual dormer window of this widely publicised Low Cost All Brick House allows the ceiling joists to be run through without a break.

The use of roof space as part of the habitable area has played a major part in keeping down costs. The actual window fitted in the dormer and the other windows in the house are standard metal windows from the Williams & Williams 'Z' range.

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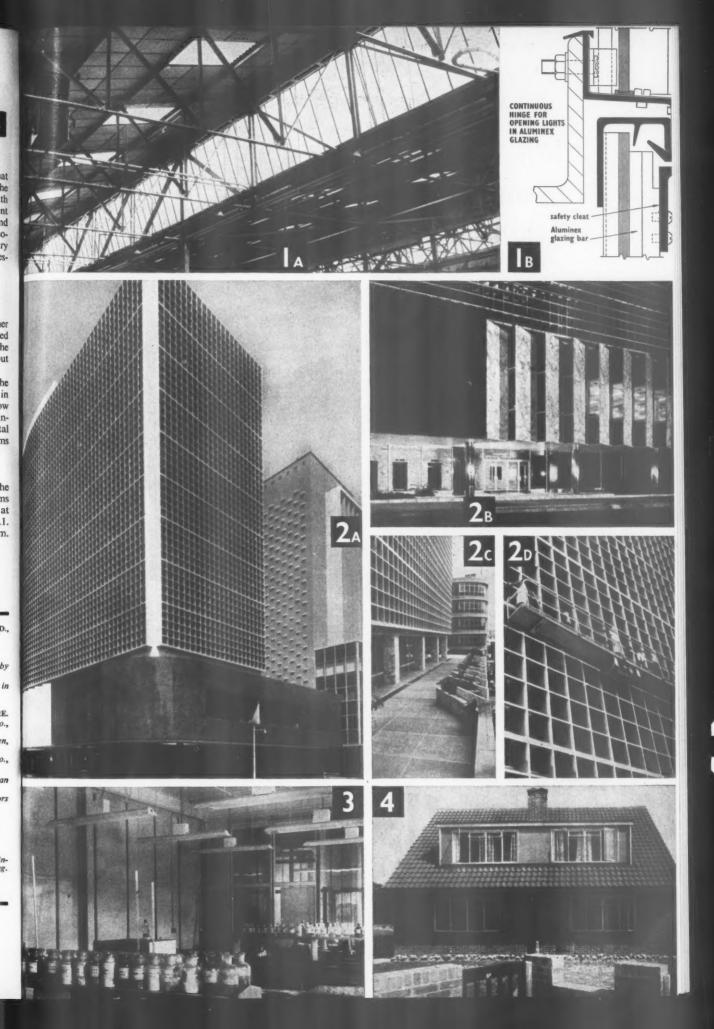
FACTORY EXTENSION, PIRELLI LTD., BURTON-ON-TRENT. Architects: Douglas & J. D. Wood,

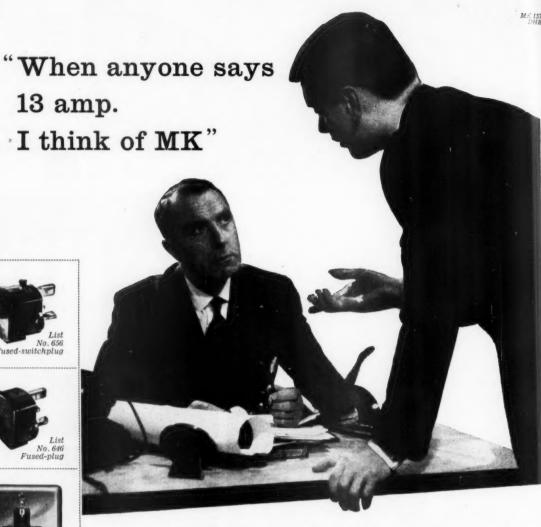
FF/A.R.I.B.A. A Good natural lighting achieved by 'Aluminex' northlight glazing.

- B Continuous hinge for opening lights in
- 'Aluminex' glazing.
 AMERICAN INTERNATIONAL ASSURANCE BUILDING, SINGAPORE. Architects-Engineers: John Graham & Co., New York and Seattle.

Supervisory Architects: Swan Maclaren, Singapore. Contractors: Paul Y. Construction Co.,

- Singapore. A Twelve stories high, it makes an
- imposing addition to the skyline. B The main entrance: aluminium doors by Williams & Williams.
- C The first floor terrace. D A close-up view of the cladding.
- VICKERS-ARMSTRONGS LTD., SOUTH MARSTON, SWINDON. Laboratory: right hand wall has glass in-fill panels from cornice height to ceiling.
- GREGORY LOW COST HOUSE. Architect: J. E. S. Glover, A.R.I.B.A.





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List No. 732 Flush brass socket-outlet



List No. 2457 Flush insulated pilot-lamp switchsocket-outlet

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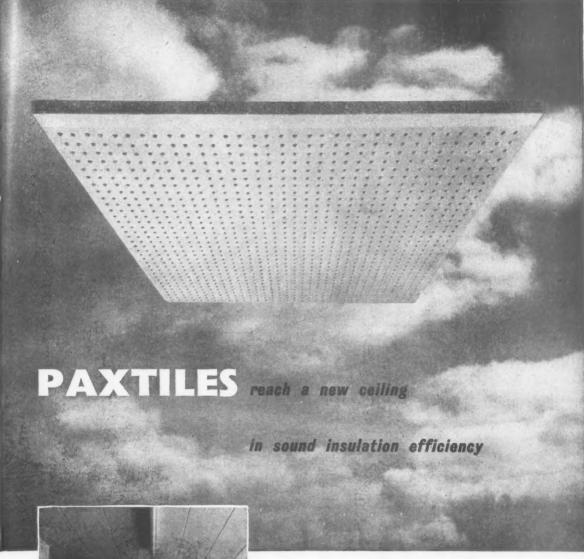
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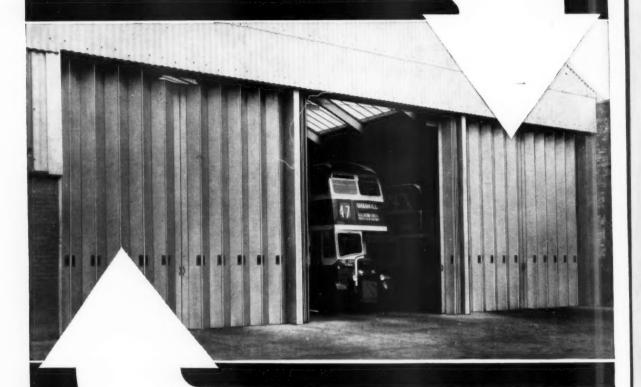
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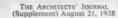
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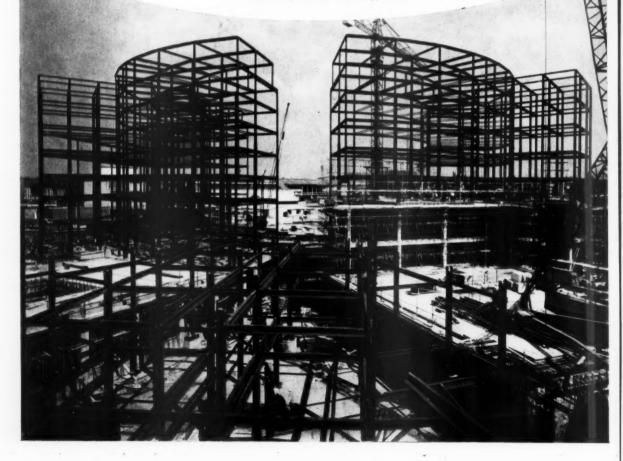
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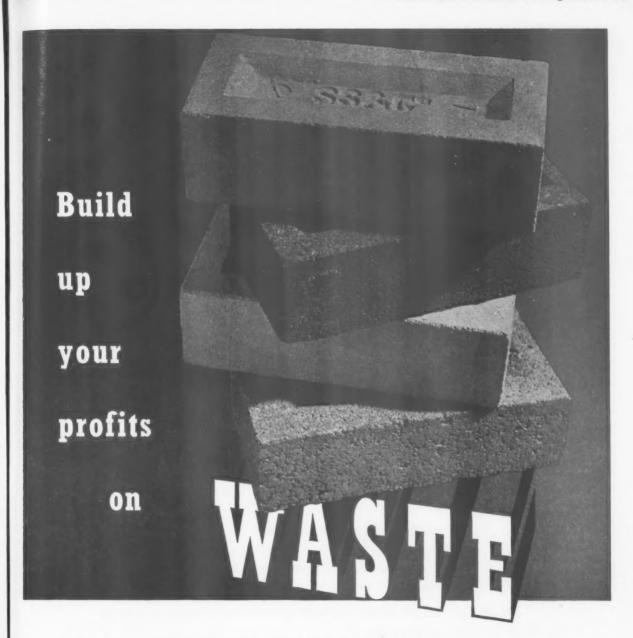
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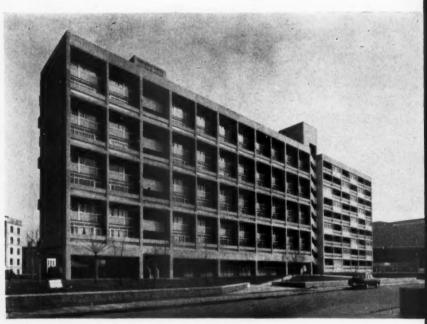
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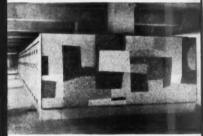
The completed 9-storey block

Thousands of railway travellers have commented on the speed at which the nine-storey block of flats at Royal Street, Lambeth (near Waterloo) has gone up. Few, however, realise that the 20-month contract time was cut by as much as 20 per cent and probably fewer realise how this was done. These are the reasons:

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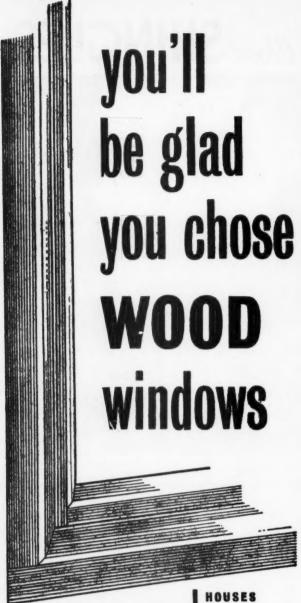
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million kilowatts of nucleargenerated electric power will be available.

Though these projects will not be completed for some time, the Central Electricity Generating Board plays an important part in today's fight against inflation. Power stations are being built at a cost no greater than in 1948 – £50 per kilowatt installed. And, although the output of the industry has doubled since 1948, the increase in manpower is only about one-third.

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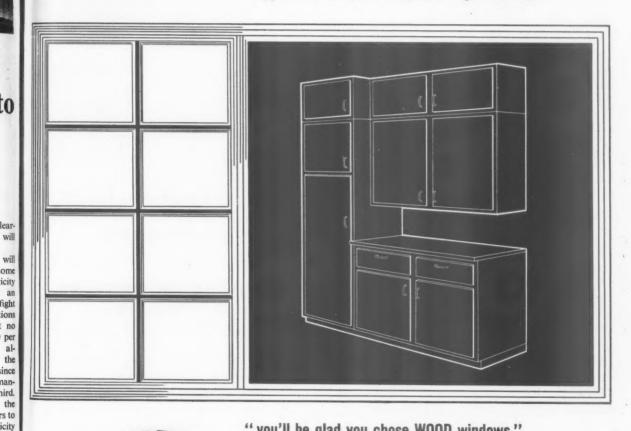
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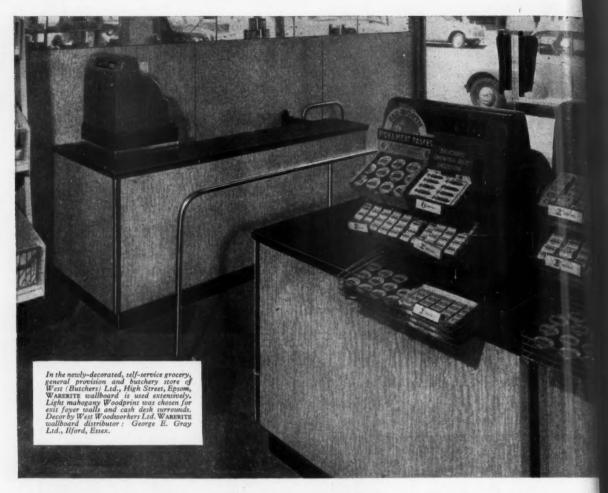
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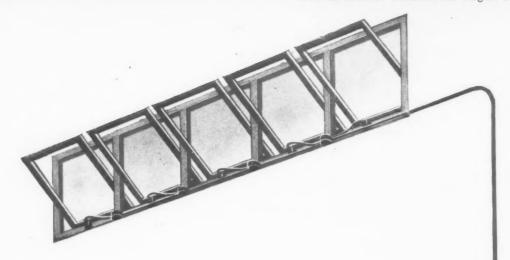


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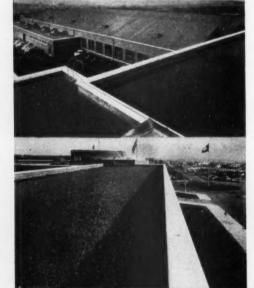


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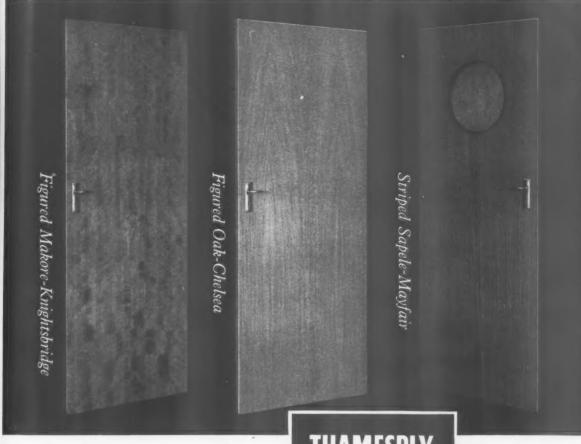
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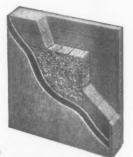
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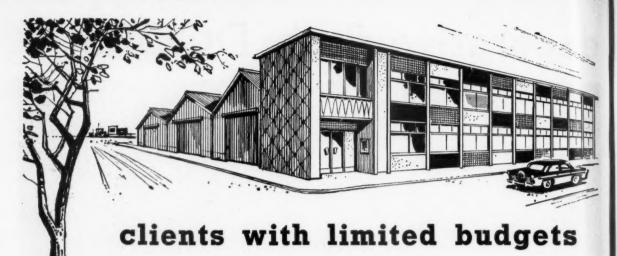
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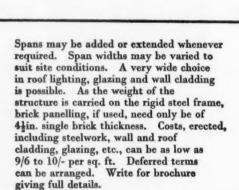


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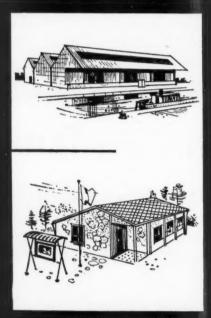
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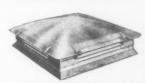


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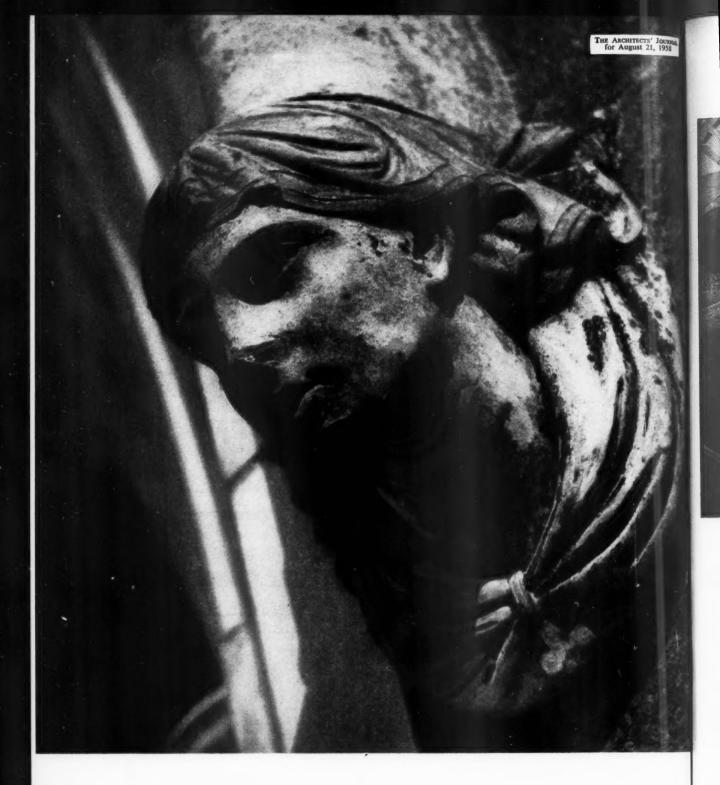


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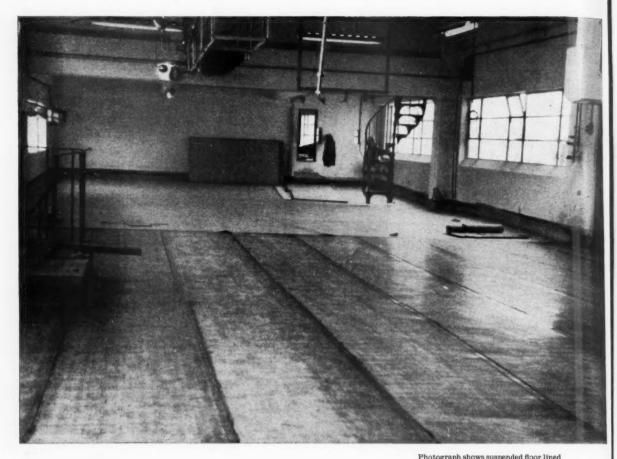
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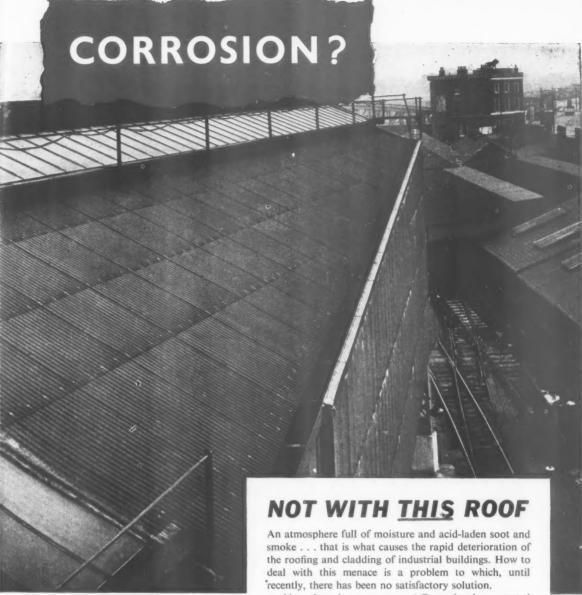
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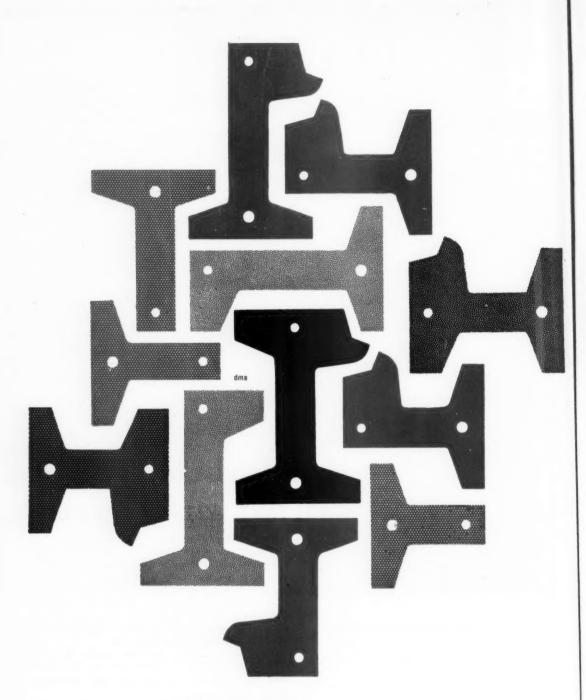
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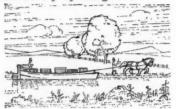


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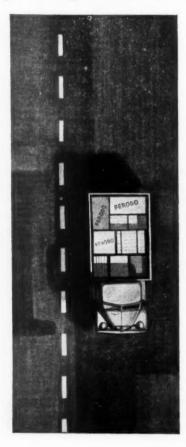
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THE ARCHITECTS' JOURNAL

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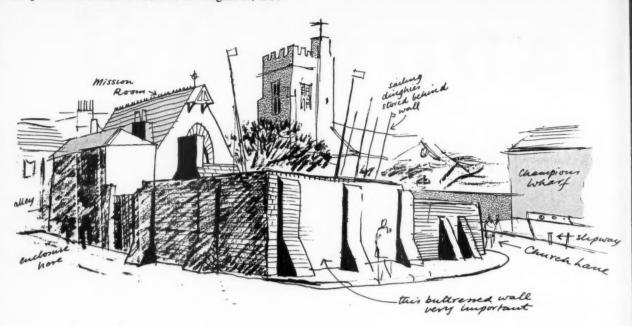
NOT QUITE ARCHITECTURE

A DIRTY WORD AT THE DESIGN CENTRE

The Annual Report of the Council of Industrial Design for 1957-58 and Professor Wyndham Goodden's talk about it on the Third indicate that good design in this country is in a rare state of inhibiting self-consciousness and general confusion as to aims and achievements.

The Council's Report asserts that "Not for generations have so many individuals been so interested in and well-informed about good design." Professor Goodden agrees with this. Where is their evidence? The attendance figures at The Design Centre? The volume of good designs now made and sold? But the Council's Report states that the bulk of manufacturers and shopkeepers have still to be convinced about good design; it also regrets the debased "contemporary" design which, being so current and so popular, has made "contemporary" a dirty word. I think both the Council and Professor Goodden are being shallow and over-hopeful when they link being interested in design with being well-informed about it. I would suggest that the stark truth is that the efforts of the Council and others in propagandizing good design to the British public have succeeded only in registering "contemporary" as an okay word and a recognizable bag of stylistic tricks. Put some nasty "contemporary" stuff in The Design Centre as a test (there is already some near-nasty stuff) and see how many people notice it and dislike it.

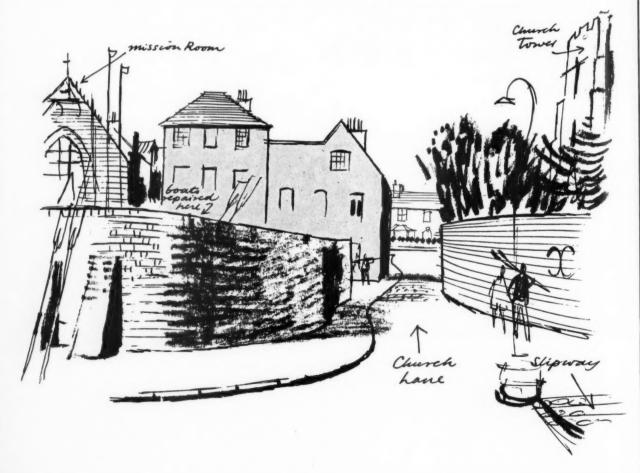
It is something that the Council's Report does recognize that in the mind of the public and of industry "contemporary"



Planner's Microcosm

These drawings by Kenneth Browne bring out the essential the focus of riverside life, and show how the river penetrates character of Twickenham's riverside (in planning jargon, the Church Street Comprehensive Development Area) which is threatened by the good intentions of the Twickenham Borough and the Middlesex County Councils. The drawings are made from two points close together on the Embankment,

this tightly-knit enclosed area. Everything in these drawings, except the Church, is likely to be demolished unless the public protests more strongly than it has yet done. The threats to this last surviving area of character in Twickenham, and the efforts of a few to improve it are described on pages 260-268.



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and good design are becoming confused; and | I am glad that the Council proposes to use Design Index to weed the travesties from the true. But there is no doubt in my mind that the Council itself, in its anxiety to give encouragement to firms making their first steps in modern design, has let slip into The Design Centre examples of work which hover between the derivative and the caricature. The Council should be far, far more ruthless in their selection; this is an age of pressure to lower standards out of charity; if the Council gives way to it, they really will become an "academy of taste" (in Professor Goodden's phrase), equivalent to another Academy we all know too well. I would think that if the Council encourages and publicizes only the original virtuoso work, the sound run-of-the-mill stuff (with which The Centre is cluttered) would take

care of itself.

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While the Council has added "contemporary" to "period" as an ogre to be struck with handout and display, Professor Goodden, in his talk, was still fighting that old battle of the styles, modern versus make-believe. But both he and the Council (and all of us) wish that every product of British industry was a fine piece of design (can't we forget about "modern" or "contemporary"?); and they wish this because upon our standard of design probably rests our national economic survival. This is much more like talking turkey than their visionary stuff about a regeneration of the national taste.

They wonder why more British manufacturers do not hire designers or design consultants; why, when they do adopt better designs, are they so often already, by foreign standards, old-hat. The answer is, of course, that the middle-size business that forms a large part of British production is run, not by a lush university sophisticate like the president of an American trust, but by men who are, in the large sense, ignorant and homely. You will no more make them men of true discrimination than you will the general British public of which they form a part; you must sell design to them on hard cash terms . . . say that the Common Market is coming, here is a German (or Italian) sample of your product, and this is the sort of style foreigners prefer. Unless you adopt something even better, you are a dead duck; we, the Council, have just the tame designer you want.

I know the Council are already doing this. But I would suggest they are wasting far too much of their talent and resources on general propaganda for the public, and not enough in capturing the keys to the strategic situation . . . the Boardrooms.

CORELLI BARNETT

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* To preserve freedom of criticism these editors, as leaders in their respective fields, remain anonymous.

The Editors

AN APPLE FOR THE TEACHER

WHEN John Smith wrote his review of architectural schools he concluded that, in effect, architectural education should be thought out all over again, and that the Board of Architectural Education should be dissolved. This could be described as a rather hasty conclusion, but there is the usual element of truth in it. In fact, the overhaul of architectural education is now being studied, though by a committee (which can be a cumbersome, inaccurate method of working) and, as announced in the JOURNAL of August 7, a seminar on heating, for teachers in recognised schools, has been arranged by Douglas Jones at the Birmingham School for the autumn. So the first tentative steps are being taken in the long journey of remedying the present state of architectural education which so enraged John Smith.

It seems unfortunate that up to now so much emphasis has been given to altering and elaborating the educational system while two fundamental points would seem to be overlooked or at least to have received little emphasis. The first requirement is a clear definition of the future architect. And leading from this is required a definition of what assistance, if any, the architect needs in the execution of his job, and from whom is he to get it: from fellow-architects, or

junior architects, or failed architects, or a new class of specially-

trained architectural assistants. The second requirement is

a study of the method of obtaining architectural teachers. An educational syllabus, however well prepared, stands or falls by the quality of the staff who have to operate it and by the quality of the text books supporting it. For years now it has been obvious that architectural textbooks, whether on history, theory or technique, largely need not only re-writing, but a fundamental overhaul of what they are setting out to do, and the discovery of the most effective means, in terms of the printed word and illustrations, of doing it. Similarly it has been obvious that not enough architects of the right intellectual calibre and experience are going into teaching.

In the long run it is certain that teaching standards will not fundamentally improve, and continue to improve, until research is more closely allied with architectural schools, and until teaching staff are given building programmes to work on and with which to demonstrate to students. Only the gift of apples of knowledge, in terms of research and practical experience, will give architectural teaching the status it deserves, and the standard of entrants necessary.

If this is a rather Utopian, long term aim, there is a relatively simple course of action which could have an immediate result, and that is the introduction, by the RIBA, of not one, but a whole series of architectural teachers' training courses. These could be run in long vacation, and could be a means not only of improving the standard of teaching, but, if run in a similar manner to Douglas Jones's seminar, could be a useful first step in the formulation of a basic set of requirements for architectural textbooks. It is obvious, of course, that any such programme must be the result of a positive educational policy from the RIBA Board of Architectural Education and the driving force behind it must be the RIBA Council itself.



THE WIDER MINISTRY

The MOE seems to send more talent abroad than any other Ministry. Just as Cleeve Barr has come back from the IUA Congress in Russia, James Nisbet is off to Norway to take part in a conference of educationists and architects, organised by Trondheim University. And very soon David Medd and Mary Crowley are going on a year's Commonwealth Fellowship to study American Schools. ASTRAGAL believes this is the first award of its kind to go to architects. Doubtless the lecture-loving Americans will expect to hear about Herts, Wokingham, rock and roll etc.

and of course colour. And no doubt Mr. Nisbet will be discussing the same things, as well as his own subject—costs. One of the secrets of MOE success is that everyone knows something about everyone else's work. Congratulations to all three, and to the MOE.

PALLADIAN IN THE CHISWICKIAN SENSE

Frederick Hiorns is perfectly right in his letter about Chiswick, which appears on another page. The house is not very comparable to Palladio's Rotonda. But surely no keen Palladian nowadays would say it was, and a bit of checking up on the works of Professor Wittkower shows that the Top Palladian of our time is rather loth to compare it at all closely.

The Professor says: "The inspiration for the general idea—a villa over a perfect square with a free-standing portico and central domed hall—derives from Palladio's Villa Rotonda. But Burlington's house is not a copy." He then lists Scamozzi and Inigo Jones, as well as other Palladio houses as the sources of deviations from the Rotonda, and also some Palladio and Scamozzi drawings (one of which had belonged to Inigo Jones) as the inspiration for Chiswick's garden front, which is like nothing Palladio ever built anywhere.

What seems particularly interesting here is the debt to Palladio's pupil Scamozzi. Two of his houses have more than a little to do with Chiswick: La Rocca, at Lonigo, which has the octagonal dome and also the propor-

tions of Chiswick, including the absence of attic; and the Villa Molini at Padua, which has the free-standing portico, the arrangement of windows on the side walls, and the "Roman" windows in the equivalent of the drum of the dome.

When everyone else was talking about Burlington's Palladianism, Professor Wittkower was always saying "Pseudo-Palladian." Now I begin to see why. Who's for the Scamozzi Revival?

HOW'S YOUR SLUMP?

How is the "recess" affecting the private architect? Odd reports suggest that things are getting very difficult, and it is clear that many offices will be affected by such things as cuts in educational spending and in house building. The LCC, which normally augments the work of its Schools' Division by commissioning work from private architects, has had its schools' programme cut by nearly one-half. And now that housing sites in London are more difficult to come by, fewer schemes are being put out to the private man. For other authorities the stopping of the general housing subsidy has led to drastic reduction of house building. This, added to the cutting back of investment by private enterprise, catches private practice badly.

The recent relaxation of the credit squeeze is a little cheering, but the building industry and the architectural profession are always the last to benefit by improving conditions, and some firms may not easily weather the lean years. Second thoughts by the Treasury on public authority building might encourage the struggling office to hang on a bit longer.

LEEDS' KINDLY LIGHT

The ICA's exhibition of—or about—the Gregory Fellowships is a deserved tribute to a great patron of the arts, E. C. Gregory, of Lund Humphries. It is also a tribute to an important cultural experiment—the series of fellowships at the University of Leeds that has permitted a number of painters, sculptors and poets to grace the campus with their presence, and—at the same time—to get on with some work without financial worries.

On the visual arts side the Fellows so far have been Reg Butler, Kenneth

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Armitage, Alan Davie, Hubert Dalwood, Terry Frost and Martin Froy, and all are represented in the ICA show. They are not represented strictly by works done during their fellowship period, and that seems a pity. It might have given other Universities a better estimate of the sort of value they might get for their money if they did something similar.

One other thought: why only painters, sculptors and poets? Why doesn't some University clear a pool of financial calm around, say, a young philosopher or critic—or even a young architect?

HIGH PARKING

Most people have their own ideas about solving the road and car parking problems, car owners are all for such schemes as burrowing under Hyde Park, and railway commuters would like to ban private cars within miles of Charing Cross. The Cement and Concrete Association has just made a plea for more multi-storey garages. But far more are needed than there's room for, and the charges for all-day storage are bound to be too high to bring people in from the minor hazards of illegal parking. With urban land prices as they are, the only way of getting reasonably-priced garaging is to have plenty of height-at least

up to the 15 or 20 storeys of American schemes.

However, the Government seem to be doing some good with its quiet nibble at the trunk road problem. A recent photograph on ASTRAGAL'S desk shows that Laings are pressing on with the London-Yorkshire motorway. At least nobody can complain that the contracting industry is unmechanized and still in the Irishman-and-barrow era.

Incidentally, ASTRAGAL was intrigued to see how the Germans handle the parking problem when he was in Hanover recently. One side of the road was completely clear; the other side had nose-to-tail parking. How is this done? The clear side has parking meters; the other side is littered with signs saying verboten.

PATIENCE OUTRAGED

Patience Strong has discovered Subtopia. Let me quote an extract from her "Quiet Corner" in this week's Sunday Pictorial.

"There are pylons and piles—Bricks and mortar for miles—where the haycarts used to pass. There are buildings in blocks—where the herds and the flocks—used to feed on sweet green grass. . . . This our land we have scarred and its loveliness marred—and the guilt we all must share. . . But we'll make a new plan. Let's preserve what we can—of the beauty now so rare."

Now that Patience has found there are things on the ground that were put there by Man, not by God; we may soon have a scheme for preserving her dream-of a sewerless and pylonless sod. For if fields that were green became almost obscene, with machines made for living on spec; there'd be no birds and bees to inspire journalese, and Miss Strong might be out on her neck. But does she not know that as new suburbs grow, destroying the haunts of the coot (not to mention the hern, and the dell and the burn) her readership's growing, to boot. If Miss Strong relys on the death of the pylon, she must face her own future with dread; for a nation with Taste would feel sadly disgraced to be caught reading Patience in bed.

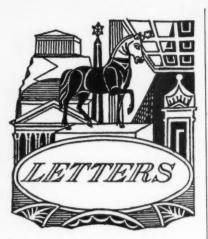






On page 256 ASTRAGAL takes up a point from this week's correspondence and asks what Palladian houses were the true ancestors of Lord Burlington's villa at Chiswick? The famous Rotonda at Vicenza, above left, is only the general parent, and Chiswick's tidy cubic form, above, seems to owe much more to two houses by Vincenzo Scamozzi, Palladio's pupil: the villa La Rocca of 1578, centre left, and the Villa Molini at Padua of 1597, lower left.

ASTRAGAL



C. J. Pell, B.Sc., M.I.C.E., M.I.Struct. E.

Frederick R. Hiorns, F.S.A., F.R.I.B.A.

G. Grenfell Baines, A.R.I.B.A.

Kenneth S. Long, A.R.I.B.A.

Peter A. Hickson, A.R.I.B.A.

L. Edwards

Secretary, Shepperton Riverside Residents Assn.

Norman Sanders, Student R.I.B.A.

Covered Courts, Wimbledon

SIR.-Mr. Gay's assumption (AJ, July 31), in designing the new covered courts at Wimbledon very little consideration was given to the player, is inaccurate. The needs of the player, the views of the All England Club Committee, and the town planning overriding emphasis on a satisfactory æsthetic solution, were all given full consideration.

It will be obvious, from the large expanse of movable walling, that the conception was of covered practice courts rather than of a "hall." This factor had an important bearing on the contribution of both natural and artificial light, and precluded the use of the more elaborate treatments which had been considered.

had been considered.

Under the conditions achieved, play is possible in normal daylight without the aid of artificial light. Varying degrees and alternative arrangements of artificial lighting from 25-45 lumins, are provided by treble phasing. This allows the merging of natural and artificial light, and provides full artificial lighting when necessary.

Having regard to the foregoing factors, and to the structural details of the dome.

and to the structural details of the dome, the positioning of the portholes and of the lighting tubes became a logical procedure. Since the completion of the dome, lead-

ing players have used the courts and found the playing conditions satisfactory.

C. J. PELL.

London.

Chiswick House

SIR,—The interesting notes and illustrations relating to this house (AJ, July 31) appropriately include a reference to Rysbrack's statue of Palladio.

It may not be generally known that the prototype of Chiswick was the notable Villa Rotunda, or Capra, on Monte Berico, outside Vicenza. It was designed by Palladio and built about 1565 Andrea to 1585or, say, 150 years earlier than Chiswick House.

On the first of my long series of annual visits to Italy, I visited the Rotunda which was then in a sadly neglected condition. Even so, its beauty and interest were such that Chiswick House cannot be compared with it, despite its attractions. In both mass effect and detail the Villa Rotunda is surely without a rival in Europe-and is certainly the domestic masterpiece Palladio.

For those interested, an illustrated des-cription by the writer is to be found in the RIBA Journal of August 28, 1920.

FREDERICK R. HIORNS. Yelverton. [See ASTRAGAL'S comment on page 256. -Eds.]

Plus ca change . . .

SIR,—Your issue of August 7 uses the following words: "RIBA gets under following words: "RIBA gets under way . . ."; "now showing just the action and leadership," about two recently published reports.

Readers should know that these documents were commissioned by and completed well within the life of the last Council so often discredited in your columns. As in politics, it seems that new governing bodies inherit the assets in addition to the liabilities of their predecessors.

G. GRENFELL BAINES.

Preston

The Editors reply: We did not intend to distinguish between one council and another, because it is obvious that state-ments published are the results of long periods of gestation. In the past two years we have found a lot to blame, but also some things to praise about the council's actions. It is, perhaps, salutary for us all to read the following, which an architect

reader has just drawn to our attention:
"The Royal Institute of British Architects
is beneath the level of other institutes of

our country.

"The curse of the Institute is the constitution of its Council.

"It is too professional—another grand error. (O she is a cautious body!)

'And this is not all. Let any man study the whole constitution of the Institute and I fear not the result. Whether it is not in its of government completely behind the age. Whether it could possibly be otherwise than that the public at large should be apathetic in the matter—the profession at large, apathetic; the amateurs, patrons and well-wishers, apathetic; the younger pro-fessionals (upon whose energy and zeal so much in all cases depends), apathetic; and the youthful, the students, also apathetic?"

"Oh, my dear friend, don't speak so! The leaders of the Institute are above suspicion; no one will support such views as you seem

to tend to."
"I do not impute the shadow of an unworthy motive to your leaders. It is the constitution I declare against as very mistaken. It is like a man who invents a life preserver and throws himself into the sea with it; he meant it to float his body-and it is but a clog—an obstruction to his native power. He had the best intentions all the while, but that which he has contrived for swimming sinks him."

The Newleafe Discourses,
by Robert Kerr, 1846.

. . . plus c'est la meme chose

SIR,—Together with other RIBA members I have received a statement by the President of the RIBA concerning the RIBA's

finances and a letter from the Secretary, RIBA. Neither of these documents answered the criticisms of the RIBA's policy made by many members of the Inpolicy made by many memoers of the institute—nor is there any indication that the various suggestions made by members regarding policy revision have been considered in the spirit in which they were given. Indeed, the two documents issued by the Institute indicate that the RIBA Council are stubbornly determined to pursue their policy, and to disregard the feelings of many of its members. I wiste the Institute recently, taking up every point the Institute recently, taking up every point in his letter. In his reply he stated that he could not add to what had already been stated in the letter previously issued. This letter opened with a misleading statement, that suggested that only 1 per cent. of the RIBA's membership were with the criticisms made. Taking of its members. I wrote to the Secretary of the Institute recently, taking up every point

cent. of the RIBA's membership were associated with the criticisms made. Taking the present membership of the RIBA as 18,000 (RIBA Kalendar, 1957-58), the percentage of members who have associated themselves with the criticisms is clearly much greater than 1 per cent.—when the result of the vote taken at the AGM and the letters received on behalf of members of provincial societies (which surely must be taken to represent the feelings of the total membership of those societies) are taken into account.

The position is most unsatisfactory, and the RIBA Council should reconsider this matter and give satisfactory answers to the criticisms made of their policy—the docu-ments already sent to members, which pur-

port to answer the criticisms, are

acceptable. There is one thing which would force the RIBA to act quickly—and that would be the threat of resignation from a number of its members. Although this would appear to be a negative means of opposition, it would appear to be the only practical course available.

I have written to the secretary, stating that I will await the outcome of the special general meeting in December before deciding whether or not to relinquish my

associateship.

KENNETH S. LONG.

Eggbuckland.

Hatfield Roofs Enquiry

SIR,-As an architect whose training was interrupted by war service, during which time I received training and experience as time I received training and experience as a clerk of works, I must refute the implications of the letter published over the name of A. D. Power (AJ, August 7). I have always understood the clerk of works to be primarily the architect's representative on the site. He is often paid by the architect so as to preserve his independence; but since such payment must necessarily be reimbursed by the client, it is often more convenient, especially with large concerns employing permanent CWs, that payment be made direct.

He nevertheless must be responsible to the client through the architect, whose instructions he takes and to whom he re-ports. In the case in question he admittedly failed to do his duty; but this in no way reduces the responsibility of the architect.

There surely is no question of the architect's liability for mistakes made by his assistants.

PETER A. HICKSON.

Doncaster.

Anyone Planning Shepperton?

SIR,-The attention of my committee has Durham Villages and Landscapes and the scenic treatment of slag heaps, depicted on page 731 of your edition dated May 15,

It is a great pity that the same intensive thought and planning is not applied to the

way bot pits are belt " Valley. The an surround and dev restorati amenitie pinion

Sheppe

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way both worked out and active gravel pits are treated in this so-called "green helt" residential area of the Thames

Valley.

The apparently insatiable demand for gravel from this area is transforming the village of Shepperton into an island site, surrounded by hundreds of acres of water and devastation, with little or no hope of restoration during the lifetime of the present residents, for whom the loss of amenities seems to count very little in the opinion of authority.

I. FDWARDS.

Shepperton.

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Windowless Factories

-1 have some comments regarding windowless factories, an article on which appeared in the July 17 issue. I feel deeply on this question because first of all a choice has to be made between functional and production efficiency and the happiness of the worker and operative. My views on the desirability or not of the windowless factory are based on the prime need and purpose surely of our civilization in maintaining and promoting the greatest happiness consistent

promoting the greatest happiness consistent with the functional needs of society. I am against the windowless factory, but not against artificial lighting. How can I reconcile these two statements? I do feel that the present factory with its overhead or north lighting is better than no daylighting at all. The fact that daylight is there gives some contact with the natural world outside. The fact that the light varies in intensity gives variety of mood and atmosphere and is thus a vitalizing influence. However I do not think they have gone far enough in that direction. I am all in favour of overhead artificial lighting for various reasons. ficial lighting for various reasons.

1. A clear design appearance can be

created.

 Space can be created for services.
 A consistent level of illumination can be achieved. (This argument is for efficiency).

However in providing the above and in satisfying functional requirements of today, we have lost some of these vital aesthetic advantages before mentioned.

we have lost some of these vital activated advantages before mentioned. It is my proposition that there is a better way of giving people contact with the outside and that is visually. Factories should be designed in units of a certain maximum size connected by access ways or roads to form courtyards and patio areas planted with trees and flowers; the view thereon and in other directions being obtained by full height, full length perimeter wall glazing. This proposal would only of course cover the larger factory projects where usually more land is available for landscaping and garden purposes. This brings me on to another point regarding the smaller factory, possibly located in the more built-up urban areas. Even today development of the factory estate sees a number of different factories of different exterior designs and treatments yet their basic functional requirements as of different exterior designs and treatments yet their basic functional requirements as regards height clearances, light requirements, etc., have been similar. Perhaps in the future there will be seen more comprehensively planned estates where land is better used and landscaped for the benefit of all (i.e., four factories sharing a rectangular or square site with intermediate courtyards and thus sharing the greater amount of land thus available, for perimeter landscaping), and also a more uniform design throughout.

also a more uniform design throughout. In your article you made reference to other windowless or near windowless working situations, i.e., department stores, large offices, etc. In order to keep this letter short I will not give my reasons but I think comparison between any of these types of working situations regarding the windowless conditions is not justified as the conditions creating the particular environment in each case ing the particular environment in each case are so very different.

also a more uniform design throughout.

NORMAN SANDERS.



RIBA

Spragg's Successor Nominated

The special committee appointed to select a secretary of the Royal Institute to succeed C. D. Spragg when he retires next year has completed its work and made nomination to council which will be considered at the next meeting on October 7.

ARCHITECTURAL HISTORIANS

AGM at York

The Society of Architectural Historians will be holding its AGM, under its chairman, Dr. W. A. Singleton, at the York Institute of Architectural Study on August 30 and 31. Professor Geoffrey Webb will address the society on the Saturday, and the following illustrated lectures will be given on Sunday: John Gloag, "Architecture and Technology, the development of the domestic window"; Dr. S. Lang, "A problem of the Italian Renaissance"; Dr. Peter Murray, "The Aesthetic Theory of Robert Adam"; Professor H. R. Hitchcock, "The early work of Gaudi."

LCC SCIENCE REPORT

Three-Year Building Programmes Urged

The cut of two-thirds made by the Ministry of Education in the LCC's school building programme for 1959-60 coincides with the publication of a report by the Council's Education Committee on science teaching in schools. The report, which inevitably deals with staffing and other problems in addition to the provision of teaching accommodation, contains some important conclusions.

contains some important conclusions.

"There are two points," it says, "which cannot be emphasized too strongly. The expansion and improvement of science accom-modation ought not to be considered in isolation from the urgent and essential improvements generally required in old buildings. Simply to provide more or better science laboratories in buildings which lack most of the facilities and amenities required for effective secondary-school education is inadequate as a real solution of the problem. madequate as a real solution of the problem. The restriction of major-building programmes to additional school places or to a limited extension of science accommodation is bound to retard the development of an effective system of secondary school education, and, consequently, to deny to many boys and girls the opportunity to make their full contribution to the national need. their full contribution to the national need. Further, in order to achieve maximum results, it is essential that there shall be some reasonable certainty about the projects upon which work will be allowed to start over a period of at least three years: this will undoubtedly encourage orderly economic and effective planning."

The report estimates that about 11,000 sixth form places will have to be provided by 1966-7. It brings out the small proportion of girls now taking science at Advanced level. Girls in science sixth forms in London form less than 25 per cent of the total. don form less than 25 per cent of the total. The numbers in science sixth forms have increased from 1,076 in 1950 to 1,817 in 1956. One result of the small number of pupils in science sixths is that in many schools children are taught in uneconomically small groups. Thus, in physics there are 60 groups with up to 5 pupils in a group, 58 with between 6 and 15 pupils in a group, and 25 with more than 15 pupils. The figures are similar in chemistry, but in botany and zoology the proportion of pupils in very small groups is even higher. Until each school can establish groups of the right size the committee recommends the use of joint arrangements between schools. joint arrangements between schools.

joint arrangements between schools. By comparison with the approved standards the Committee found that in the 75 London grammar schools approximately 60 additional laboratories for advanced work were required, and 18 existing laboratories needed refurnishing or improvement. There were even more serious deficiencies in the provision of science-teaching spaces and ancillary rooms for main school work. The majority of science teaching spaces were below the proposed standards, about 25 per cent of them seriously so, and the number of such spaces needed to be substantially increased. 123 schools had no science storerooms and many had inadequate storage increased. 123 schools had no science store-rooms and many had inadequate storage space. The report concludes on this subject, "It is, indeed, difficult to see how the kind of improvement proposed in this report can be fully achieved in buildings constructed towards the end of last century and the beginning of this century without extensive beginning of this century without extensive remodelling involving expenditure beyond the limits of minor-building programmes. In some instances the problem can be solved only by the provision of new schools." The report outlines a programme for the provision of new science buildings, new classrooms, conversions, extensions and improvements or for the provision of sequences. rooms, conversions, extensions and improvements, or for the provision of equipment. On the basis of this report the Council proposed to include in the 1959-60 school building programme the expenditure of £900,000 on 33 projects for teaching science and mathematics in secondary schools, together with major extensions (including provision for science teaching) at three schools estimated to cost £486,470. The Minister has, however, restricted the LCC to an expenditure of £265,000 for science and mathematics projects during the year.

A service for readers abroad

In response to requests from overseas subscribers, we have arranged that cuttings of JOURNAL advertisements of architectural appointments, vacant and wanted, for public and private offices, shall be despatched on request by airmail on Wednesday of each week (one day prior to publication date). The cost of this special service to overseas subscribers will be 5s. for four weeks (1s. 3d. for each additional week) and prepayment should be sent by readers wishing to take advantage of this service. The charge being made represents only the actual cost of postage.

Toronto.

Fig. 1. The embankment, Twickenham. Above, the present subtopian state of Water Lane with its dreary council houses, cluttered cars and sleezy bomb site "park". On the right is the unspoiled part of the embankment, No. 2, in the foreground, is a Georgian house restored after war damage, and behind it

Strand House, a listed building. The Queen's Head is directly in front of St. Mary's Church tower. The shed by the bombed site is a boat house. Originally there was a large boat house on this site (Fig. 2, below).

TWICKENHAM ON THE THAMES

A small part of old Twickenham still retains an intimate riverside character. Even so, however, it is due for intelligent development and repair. The following pages tell the story of the planning proposals which have been put forward—largely inadequate ones by the local and county authorities, and a rather better one by Max Lock. And Kenneth Browne, by sketches, shows what should be aimed for. The most significant thing, however, about this planning incident at Twickenham, is that it is largely through the efforts of an architect living locally, Neville Conder, and a lively rate-payers' association (not forgetting a sympathetic Ministry) that this borough is possibly on the way to getting the plan it deserves. It is thereby an object lesson to architects everywhere.

Fig. 2.



There is, unfortunately, very little left in Twickenham that is worth preserving. But there is one part that has not yet been engulfed in the suburbanizing tide. Countless Londoners, and others who have spent their summer evenings or weekends at the riverside, hiring boats, watching the endless variety of the river's activities, drinking in the garden of the Queen's Head, know that here is an area of real character, interest and charm. Whether it will remain so in the future is, however, an open question.

The picture above (Fig. 1) shows at one and the same time the character of the old and the threat that hangs over it. On the right of this picture is all that remains of the old Twickenham riverside, and very good it



looks, too. The left hand side shows the subtopian mess that has already been made of Water Lane and the dreary council housing put up there. The shed on the vacant site (where a flying bomb fell) above left, is the boat house for the boat hiring business conducted from the slip in the foreground. At one time, as an old photograph (Fig. 2) shows, there was a fine old boat house on this site. Kenneth Browne has revived this idea in his drawing (Fig. 3) which suggests how, in

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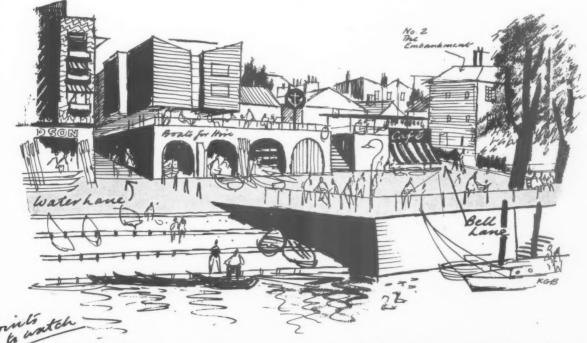
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a modern idiom, it would be possible again to give a real boating riverside flavour to this place. The alternative, proposed by the Twickenham Borough Coun-

Fig. 3. Kenneth Browne's drawing revives the idea of a boat house at the foot of Water Lane, and shows how this part of the embankment could regain, in a modern idiom, the nautical air it once had.



1. keep water have narrow and dramatize change of levels 2. provide badly needed boat storage & riverside cafe

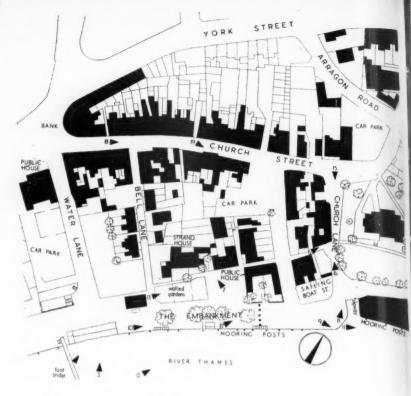
3. build tightly and the more angles the better.



Fig. 4 (above). Open-air swimming bath built by Twickenham Borough Council before the war. The designer does not seem to have noticed that he was building on the riverside.

Fig. 5 (right). Plan of the area as it is today, showing viewpoints of illustrations to this article.

Fig. 6 (below). Characteristic of the area today is this little alley running into Church Lane. It would disappear under all the plans so far proposed. One asks, why?





cil is to build more houses, as we shall see from their plan when we come to discuss it later. If this proposition does not alarm you, look at Fig. 4, which shows the open-air swimming bath built by Twickenham before the war-a characteristic piece of Twickenham municipal architecture. It does not seem to have occurred to the designer that he was building an open air pool on the banks of the Thames: as far as the bathers are concerned, the Thames does not exist. A wonderful opportunity has been wantonly thrown away and a beautiful place wantonly violated. To understand the area better, let us look at a plan (Fig. 5) of the area as it now is. It discloses the essential character of the whole area between the river and Church Street—a fascinating group of old buildings, interlaced by alleyways (Fig. 6) and dominated by a grey stone church tower. Gap-toothed by bombing and demolition, this group still retains a form which any rebuilding must respect. In front, the embankment with its fine chestnut trees is sculptural and clear cut, not grassy, forming a fine base for the buildings. There are some Georgian buildings on the riverside (Fig. 7), one of which, Strand House, is listed: but merely to preserve these buildings cannot, of itself, preserve the character of the riverside or the area behind it. The strong nautical character is emphasized by the slipways at either end (Fig. 8), the boat-hiring and boat-building (Fig. 9), and the barges lying at Champion's wharf (Fig. 10), an old building that effectively stops the eastward view along the river bank and brings to the bank the barges shown in Fig. 11. The area is full of surprises: going round corners one comes upon boats, oars, masts in surprising places: open it up, and the character goes. Kenneth Browne's drawing (Fig. 12) shows the essential elements which





Fig. 7 (far left). The Georgian houses are preserved in all these proposed schemes—but preserving these houses does not of itself preserve the character of the riverside. Fig. 8 (left). The slip at Champion's wharf brings the river almost into the vicarage garden.





Fig. 9 (far left). The river is a hive of activity, with boat-building on both banks. Some misguided residents, however, consider that these industrial activities—which give it much of its character and interest—lower the tone of the neighbourhood. Fig. 10 (left). Sunday morning: Champion's Wharf, in the background, is an essential eyestop. Fig. 11 (below) is a close-up view of Champion's Wharf. It is condemned. Why?



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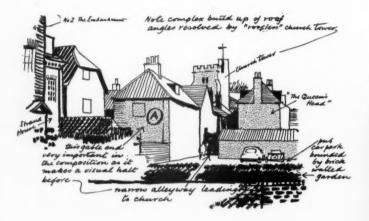
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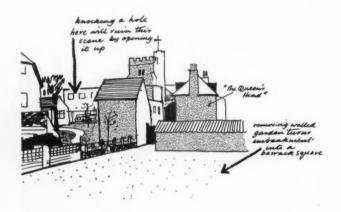


Fig. 12. Drawing by Kenneth Browne to show the essential elements of the riverside area.

Opposite page: Fig. 15 (top) is looking down Church Lane towards the river, from the Junction with Church Street. Fig. 16 (bottom) shows Church Lane. For this narrow, winding lane, hemmed in by walls and overhung by trees, the Borough Council would substitute a bye-law street.



Two more drawings by Kenneth Browne. Fig. 13, above, analyses the area behind the riverside and Fig. 14, below, shows how it will look if the proposed demolitions by the Middlesex County Council are carried out.



make up the character of the riverside embankment. In Fig. 13 he has analysed the elements that make up the charm of the group of old buildings behind the Queen's head, and in Fig. 14 he shows the consequences of the demolitions proposed by the Middlesex County Council. A large part of the embankment's charm lies in the fact that, while cars can reach it down Western Lane and Church Lane, Church Lane is so narrow as to discourage motor traffic (Figs. 15 and 16), and bollards on the embankment prevent







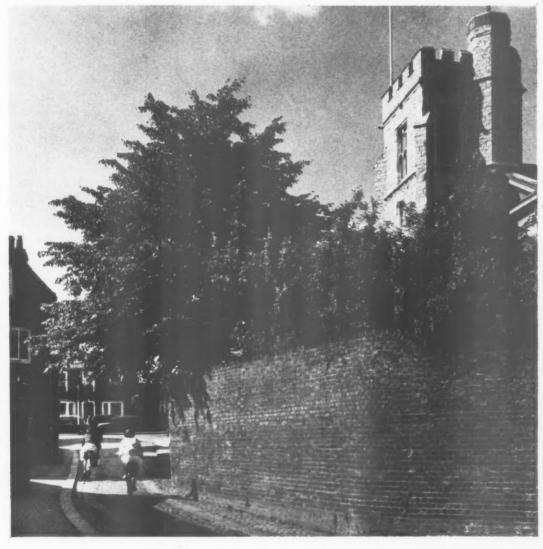
Fig. 17 (top). The bollards halt the motor car invasion at the Queen's Head. Fig. 18 (centre). Church Street looking east. Fig. 19 (bottom). The Borough Council proposes, in its plan, to pull down these fine old houses in Church Street. Langton's bookshop is thought to date from 1680.



Church Church For this overhung bye-law

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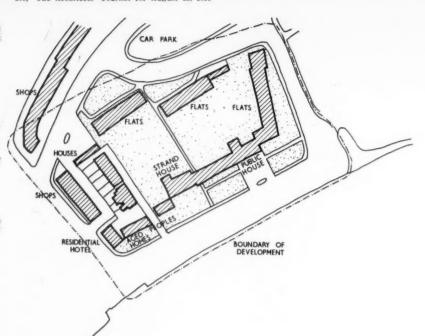


Fig. 20. An early plan by the County Planning officer which makes the fundamental mistake of believing that comprehensive development means razing buildings to the ground.

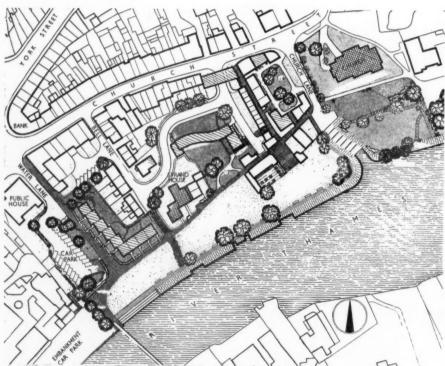


Fig. 21. A later plan by the County Council showing how the Council plan has improved, largely through the continuous pressure exerted by local citizens.

through traffic altogether (Fig. 17). To the north this area is bounded by Church Street (Fig. 18), a tight little shopping street with some fine old buildings (Fig. 19), and in between is an area of alleyways and old buildings, some of which have already been demolished.

During the war the flying bomb at the corner of

Water Lane and the embankment added to the demolitions. The Ministry of Town and Country Planning requested the Middlesex County Council to designate the area in its development plan as a Comprehensive Development Plan, less on account of war damage than on account of bad layout and obsolete development. The County Planning Officer, B. J.

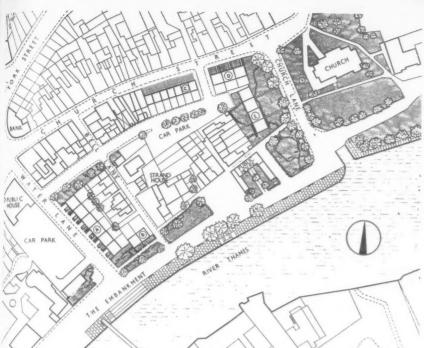


Fig. 22. The plan produced by the Borough Council which, though an improvement over earlier efforts, still interprets improvement as meaning road widening.

Collins, produced a plan (Fig. 20) which, to quote an official minute, "became the subject of much controversy." This was hardly surprising, for it made the fundamental mistake of believing that "comprehensive development" meant razing all buildings to the ground except the Strand House, which was listed, the pub (presumably too expensive to buy out), and the council houses (which were "modern") and erecting some slab blocks of flats and shops surrounded by grassed areas—destroying every vestige of character the area possessed.

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Since then the County Council has produced a very much better plan (Fig. 21), and the only reason for dragging up the earlier one is to show how much the County Council has benefited from the continuous criticism and pressure of enlightened local citizens, notably the Twickenham Ratepayers' Association, in which Neville Conder and other architects have played a considerable part. Credit for the spread of enlightenment should also be given to the Ministry of Housing and Local Government which refused to sanction a subsequent scheme prepared by the Twickenham Borough Council. In approving the Development Plan in 1956 the Minister said: "While this area contains much decayed property, it has a distinctive character and includes some Georgian property of considerable interest and charm. The Minister agrees that this area needs to be redeveloped but he feels that further consideration should be given to the form of redevelopment, which in his view should respect the character of the neighbourhood and harmonize with the properties to be preserved. He will await further and more detailed proposals from the Council for dealing with the area."

The Minister's attitude forced the County and the Borough Council to think again. The Borough

Council has now approved a plan (Fig. 22) by A. S. Knolles, the borough engineer (H. S. Gardiner, assistant borough architect) which showed some improvement over the conceptions of 1951, but which still fails almost completely to understand the character of the place. Its assumption that "improvement" means widening results in pulling down Church Street, the south side, for half its length, and setting back the new buildings. The borough seems to imagine that keeping the pavement where it is fulfils its assurance that the present width will be generally maintained. This is an obvious case of thinking in plan only. Instead of realizing that the embankment is essentially pedestrian priority, it seems designed to make access to the embankment easier for the motorist by widening and straightening. Look at its treatment of Water Lane and then at Figs. 2 and 3. There is a general, and deplorable, tendency to prettify. Champion's warehouse is to be swept away and replaced by a bit of seaside municipal gardening. The wall at the corner of Church Lane, and the embankment, shown in Kenneth Browne's drawing (page 254), which is one of the key elements in the composition of the embankment, similarly disappears.

But this must be said in the borough council's favour. It was sufficiently impressed by the criticisms to put on public show last month (July) not only its own plan, but also the considerably improved plan (Fig. 21) by the Middlesex County Council, and four sketch plans prepared by Max Lock, the architect and planning consultant, for the Twickenham Rate-payers' Association, to suggest how the area could be developed. (The value of the exhibition was greatly diminished, however, because it showed only plans, which mean nothing to the public, and not a single model or sketch.) One of Max Lock's sketch plans

Fig. 23. One of Max Lock's sketch plans for the Twickenham Ratepayers' Association,

(Fig. 23) was considered both by Mr. Lock and the Association to be the most worthy of further study, but it is not "The Ratepayers' Association's Plan." The Association considers, however, that the attributes in Mr. Lock's plan which it would like to see in any plan that is ultimately executed are: (1) the retention of many of the existing buildings; (2) careful relation of new buildings in scale to the existing buildings to form an inter-related group of spaces that preserve the general visual character of the area; (3) discouraging through traffic in a riverside area arranged primarily for the pleasure of its inhabitants and pedestrian visitors; (4) an understanding of the nature of the charm of the riverside area which derives in large part from its sense of enclosure between Wharf Lane and Church Lane, expressed by the determined retention of a building on the site of Champion's Wharf, and (5) an understanding of the present visual weakness of the area-the split caused by Water Lane and the vacant adjacent site. The Association, in a statement, says "The Association does not want to make this area the same as every other area of Twickenham. They want to press for a scheme that acknowledges that this place has a character of its own; a scheme that springs from a close study of the factors that make up that character and that re-creates it in terms that will work with today's needs." Mr. Lock's scheme, it will be noticed, makes Church Street a pedestrian shopping centre, and goes much further than any of the others in facing, and solving, the traffic and parking problems while preventing the motor car from invading the embankment. And it keeps, as a retaining wall, the wall at the junction of Church Lane and the embankment. But one cannot help feeling that it

knocks away too much, and thus endangers the characteristics that it is seeking to preserve. Why cannot some of these car parks go elsewhere? This area should be tightly built up.

The County Council's latest plan (Fig. 21) closes Church Lane and Water Lane, and preserves the present character of Church Street. But is destroys the character of Church Lane, removes the old buildings behind the Queen's Head (which the borough's plan, as a result of local pressure, retains), envisages a large gravelled riverside area like a barrack square, and replaces Champion's Wharf by gardens.

It is obvious that the fight against dead-end planning, and in favour of constructive, sympathetic planning, has already caused the planning authorities to change their minds and improve their ideas. Local architects have shown what a great contribution they can make, through unofficial channels, to the planning and the architecture of their area. The plans which have been shown to the public contain between them nearly all the elements required for a successful solution to this problem. Is it too much to hope that the Twickenham Borough Council will now think again? And that the County Council will refuse to sanction a plan that does not include the attributes stated by the Ratepayers' Association? The Ministry, having already saved this area by its firmness, can (one hopes) be relied upon not to accept a weak compromise when continued firmness can ensure complete success. This does seem, above all, to be an area where the less interference there is with its present character, the better. The purpose of development should be to strengthen that character, particularly by enabling the area to come to equitable terms with the motor car.

KEY: 1 Dres 2 Stage 3 Doo 4 Dim

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CRITICISM

The architects reply

In the Journal of August 7, J. M. Richards commented on the new Belgrade Theatre at Coventry, designed by the city architect, Arthur Ling. In the same issue we published a full description and cost analysis of this building which has prompted a comment from consulting engineer Peter Jay. We print here the city architect's replies to the points made by Mr. Richards and Mr. Jay, and our theatre correspondent's reply to Mr. Jay.

Firstly, I should like to say how much I appreciate Mr. J. M. Richards' fair criticism. In most cases I am aware of the short-comings that he points out. Indeed there are others which I could mention. Some of them arise out of the nature of the brief given to

the architect, including financial and site limitations. The flats are rightly criticized as being subject to noise as they are situated directly on a city street. Offices, no doubt, would have been better in this position. Unfortunately there is little demand for office space in the City. The decision to have flats was partly due to the policy of providing living accommodation for the artists and partly as a general policy to provide living accommodation in the central area. So far as noise is concerned, the occupants do not seem unduly worried.

By continental standards the public spaces are small and I certainly would have liked to have made these very much larger. However, restrictions of costs and site prevented this.

I agree that the entrances to the stalls are not particularly evident and this is to some extent inevitable with the asymmetrical position of the main entrance. It does have one advantage, however, and that is that the congestion which takes place at the beginning of a performance is kept completely clear of these entrances into the auditorium.

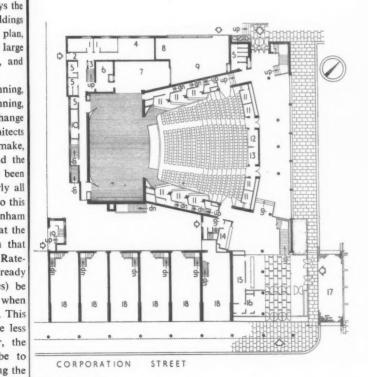
I agree that the sub-division of the foyers by the row of columns is not particularly happy. This would have been avoided had it been possible to expand the foyers to a more generous size. On the other hand, these columns do separate the circulation areas from the sitting out or promenading areas.

The location of storage space under the balcony, separated from the backstage areas, is not ideal but it would have been necessary to add considerably to the cube of the building to provide it backstage.

The permanent lighting of the narrow windows on the façade to the square does have an important effect at night and it will be possible to have the

Paint room 14 Coffee bar 15 Cloaks Dressing room Flat store 2 Stage door Workshop 16 Box office 10 Electrician 17 Porte cochere Doorman Dimmer room 18 Shops 12 Producer/stage director 19 Flats' entrance 5 Lavatories

13 Lighting control



Ground floor plan

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The auditorium looking towards the stage.

switching to these co-ordinated with the foyer lighting to ensure that they are on at the same time.

To have the offices leading off the restaurant may not seem the best arrangement but it has not proved inconvenient as they are not normally in use during evening performances. The provision of a separate entrance and circulation space for the offices would have meant reduced foyer space for public use.

The mosaic, although not having a particularly strong design motif should really be judged, I think, as a

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background to the general movement of people within the foyers. In this respect I think it is right for it to be relatively subdued.

It is possible that the shortcomings of the upper boxes are due to a struggle between design and function. Their main purpose is to help provide a link between the stage and the circle and they present a difficult design problem in a traditional theatre of this type.

One of the chief difficulties in designing a theatre, as in other buildings of a specialized nature, is to obtain a clear brief from one's client. Ideally the director of a theatre should be appointed and policy decided before the architect produces his sketch designs. Even if one takes advice from someone experienced in the theatre there is inevitably a divergence of opinion on fundamentals between theatre experts.

CRITICISM: what readers think

In his criticism of this building J. M. Richards has been wise enough to admit that he does not possess the technical knowledge to discuss its sucess in its capacity of a theatre. However, the author of the description of the building has no such inhibitions and treats us to many comments which illustrate in a striking way the difficulties of designing specialized buildings, and particularly theatres. It is so easy for the architect to think that he has understood a problem when he has, in fact, totally missed the point. We are told, with an air of hurt surprise, that theatre people reject suggestions from the architect for an arena stage although (presumably other) people in the theatre are "dedicated to it with a prodigious zeal." It rather sounds as if your correspondent has gained his theatre experience in cocktail bars and from the pages of literary magazines. This is no place to discuss the question of stage forms, but the architect is scarcely qualified to tell the producer how best to present the play. Would he, for example, be equally hurt if his suggestions for the alteration of manufacturing processes in a factory were rejected?

There are a number of fundamental errors of judgment in the design of this theatre, as follow:

- 1. The adoption of a deep permanent apron in conjunction with a picture frame. This makes the production of plays with conventional interior settings much more difficult than it need be (notwithstanding "modern ideas of actor-audience relationship," since this relationship is entirely destroyed if there is a deep apron and it is not fully used). It would have been far better to provide a small permanent apron with facilities for extending it when required.
- 2. The onstage boxes are so placed as to make it difficult to prevent the occupants seeing through into the wings.
- 3. There is too little wing space for a theatre of this size. Your correspondent is groping towards this idea in suggesting that the paint shop and work shop

should have been continuous and in a straight line from the stage, but the real requirement is for more wing space.

These are the major points. There are many minor ones, for instance, only six dressing rooms, two of which appear to be singles, the position of the front-of-house lighting is unfortunate and restricting, siting the sound control in the front of house is a mistake unless the operator can hear what the audience hears, etc., etc.

All these points illustrate the dangers of half-know-ledge, and add up to the fact that the citizens of Middlesbrough, who were advised by a proper theatre consultant, have had far better value for their money than those of Coventry, who appear to have taken their advice from many different sources, and to have misunderstood much of it.

PETER JAY

The above letter has been shown to Mr. Ling who makes the following comments:

I agree with the comment that it is not the architect's responsibility to decide whether the theatre should be traditional or experimental. In the case of the Belgrade Theatre a traditional form was the basis of the architect's brief and the advice of a theatre director was taken on the design. The "deep permanent apron" stage is not permanent but a removable cover over the orchestra pit.

The sight lines of stage boxes are never ideal but this affects so few of the audience that it does not justify a condemnation of the sight-line planning generally which is perfectly satisfactory.

The restriction of wing space is due to the limitations of the original financial budget but the wider than usual proscenium opening also partly accounts for it. The back-stage accommodation is as large as the financial budget allowed but it is capable of extension. As regards the position for sound control at the rear of the stalls, this seems to work well in practice. Permanent intercommunication between the stage and the control room allows all dialogue to be heard there and it is a simple matter at rehearsal to work out the settings on the control panel to give the required volume of sound. It is also an advantage to have the lighting and sound control together with a good frontal view of the stage. As regards front-ofhouse lighting. I have met conflicting views expressed by theatre consultants.

Our theatre correspondent writes:

To Mr. Jay the form of the theatre reached in the late Victorian era (a vintage period for the drama?) is sacrosanct, the ultimate expression of theatre design. A slightly longer historical perspective might shake his dead certainty. His criticisms of the Belgrade are of the ways it falls short of the best 19th century theatres and the hint that there might be a case for fundamentally rethinking the playhouse and the method of presenting plays produces the usual scorn. He criticizes the ineffectual compromises that have been made but from a different standpoint from your groping correspondent who will now retire hurt to his cocktail bar to rifle through the pages of some literary magazines.



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THE INDUSTRY

Brian Grant describes a leaflet on tiled fireplaces, a central aerial system, two door catches and ceramic mosaic flooring.

Fixing tiled fireplaces

The Tile Fireplace Makers' Association has just issued a leaflet to help architects in the specification of proper fixing methods. The leaflet is quite informative, and has been approved by the Coal Utilisation Council. One of the most common faults is not to allow for the necessary expansion and contraction, and it is essential that the space behind the fireback should be filled with a lime mortar and an aggregate of broken brick or fireclay, not ballast or gravel. When sunk fires are installed attention is drawn to the need for a space between the front edge of the fire and the back edge of the hearth, and it might also have been worth mentioning the fire risk of installing this type in old houses without adequate precautions. (Copies from 381, Salisbury House, London Wall, London, E.C.4.)

Radio and TV aerials

There are now quite a number of firms specializing in the installation of central aerial systems with amplifiers and co-axial distribution leads. To the list should be added Belling-Lee, who supply 40- and 10point amplifiers with power consumptions of only 25 and 10 watts, so that running costs are negligible. Valves which are guaranteed for 90 days are fitted, but in practice the manufacturers claim that replacements are seldom needed at intervals of less than a year. The system is suitable for blocks of flats or housing estates, but, as with other systems, it would seem desirable to have someone on the spot to carry out replacements-easy enough in a flat block, but perhaps awkward on a housing estate. (Belling & Lee Ltd., Great Cambridge Road, Enfield, Middlesex.)

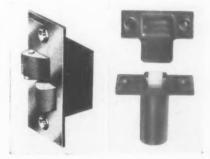
Two new door catches

The Nyro adjustable door catch (Evered & Co., Ltd., Surrey Works, Smethwick 40,

Staffs) has a silent nylon roller which can be adjusted while the catch is in the door. The catch needs only a single hole drilled in the door and sells at 4s. 9d. retail. The Weaver catch has a pair of quadrants which open within the slot cut in the striking plate, firmly holding the door in position without rattle. Price is 5s. 6d. in brass or 6s. 6d. in chrome. (Thomas Crompton & Sons Ltd., Ashton in Makerfield, Wigan, Lancs.)

Mosaic flooring

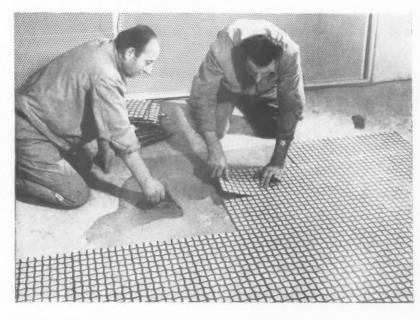
The Joo-Gresite range of ceramic mosaic tiles has been available in this country for some time, and is produced in a variety of shapes and colours. A recent development is Gresiflex, a ceramic mosaic flooring set in rubber, which has been used for the first time in this country in a branch bank at the Washington Hotel, Curzon Street. The photograph gives a good idea of the shape of the floor units, which are about 9 in. by 10 in., and are laid with an adhesive on a screed. The shape of the units varies with the shape of mosaic used, and it is of course also possible to vary the colour of the rubber in which the tiles are set, thus giving a considerable variety of colour. The rubber provides an unusual degree of resilience and also makes the floor non-slip. Price is about £5 per sq. yd., so that it is a



Left, the Weaver door catch and, right, the Nyro adjustable door catch.

comparatively luxurious finish, but this figure is in part due to import duty and purchase tax, which between them add no less than 42½ per cent. to the price delivered in London from Milan. A pity, but there is nothing much that the importers can doabout it. (P. Barwin Ltd., Glyn Street, Vauxhall, London, S.E.11.)

Laying Gresiflex, an Italian ceramic mosaic flooring set in rubber.



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Practice. Teamwork in housing: a scheme in Rotterdam

7 PRACTICE

teamwork on housing projects a scheme in Rotterdam

In this country, it begins to look as if the marked growth of all-in service organizations will, by sharp competition, hasten the development of architect-builder co-operation. But the only large-scale exploration of this, to some, dangerous ground that we have for housing work, is the Picton Street scheme of the LCC. This week we present an account of a scheme in Rotterdam, designed by teams of architect-engineerbuilder and management consultant. Their task-to make good the wartime loss of 28,000 dwellings-was tackled with characteristically Dutch boldness of scope and logic. The first article is by H. K. Duhoux, Deputy Director of Housing to the City of Rotterdam, who describes the overall strategy; articles in future issues of the JOURNAL, by individual members of the team, will present details of the tactics.

In order to give an idea about the size of our housing problems in Rotterdam, the fact should be mentioned that Rotterdam, a city of more than 700,000 inhabitants, lost 28,000 dwellings (houses and flats) during the last war by bombardment.

For different reasons this shortage of 28,000 could only be reduced to 25,000. Though production was gradually stepped up until it reached about 4,000 dwellings a year, this was scarcely sufficient to cope with the increase in population (natural and immigra-

Fig. 1. A completed part of the scheme.



tion). It should also be remembered that the average number of persons per family is decreasing.

According to the ground which was available at the end of 1955 and which would become available-it was thought possible to build 6,500 dwellings a year, 4,500 to be built by public authorities and non-profit building societies, for working-class people, and 2,000 by private enterprise, for middle-class and better off people. Even at this rate the housing problem would not be solved until 1970 but it was considered an absolute necessity to reach this rate of production as quickly as possible. This figure, which was 60 per cent higher than that which could be considered as normal (6,500 instead of 4,000), would be difficult to reach, especially because of a serious shortage of skilled manpower both in preparation of the projects and in carrying them out on the building sites. This meant:

- 1. That skilled labour (carpenters, bricklayers, plasterers) had to be attracted into the area in spite of the housing problem;
- 2. That types of construction should be chosen, needing the smallest possible amount of manpower;
- 3. That each project should allow the contractors to use their equipment in the most efficient way; and
- 4. That allocation of contracts for building-works should be timed in such a way that the available building-capacity (manpower and machinery) would be kept working steadily. Ups and downs had to be avoided.

Customary procedure

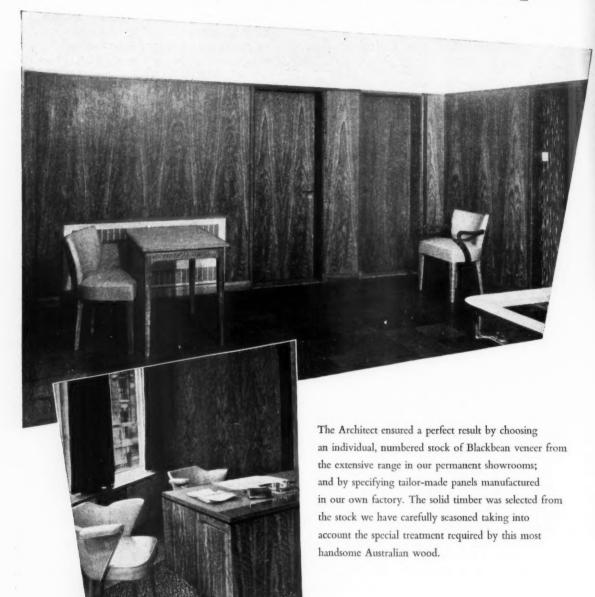
Production of dwellings means not only building them but planning and designing too, and it is to be regretted that in practice the production shows a lack of co-operation. There are three main phases:

- (a) the townplanning part of the job; survey of needs, dividing available space, planning of situations;
- (b) the architects part: planning, designing and describing the dwellings to be built; and

(c) the contractors part: the proper building job. In most cases the townplanner makes a development plan from which several architects have to work, each of them on a comparatively small part of the plan. Neither the townplanner nor the architect know who will be the contractor to be charged with the proper building task, and it is impossible to make plans suited to the contractor's equipment. The contractor, eventually given the work after a tendering period of about four weeks, makes the best of the organization of the work. One consequence of this system is that the amount of work with which the contractor is charged can differ a great deal in course of time; continuity is not guaranteed.

Of course there are good reasons for seeking competitive tenders for building work, especially when contracts are placed by public authorities. It may be considered in the general interest, that every contractor who is able to carry out the work, is given a fair and equal chance but it must be made possible to relax the rule of open tendering in favour of selective tendering or even of direct placing of a contract in

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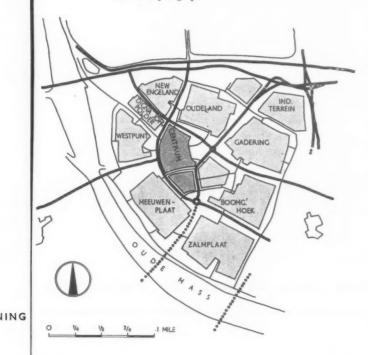
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Fig. 2. A model of the housing scheme at Rotterdam that was planned and is now being built, by a number of architect-engineer-town-planner-builder-management consultant teams.

Fig. 3. Outline plan of Hooglviet development. The tinted areas are neighbourhoods, the various parts of which were allocated to a number of design teams, as shown in the table of Fig. 4.



cases in which such a procedure is considered to be in the greater public interest. In our opinion this was the case in Rotterdam in 1955, and on our suggestion municipal authorities permitted us to start a new way of preparing building projects for the production of 3,000 dwellings a year, these 3,000 being an important part of the 4,500 required for working-class people.

New procedure

We based this production on the co-operation of six so-called production teams, each having the task to produce, according to a certain programme, a constant stream of 500 dwellings a year in the most efficient way, both as regards manpower and cost. Each team consists of:

(a) an architect (four of them are private architects and two are architects from our service);

(b) a consulting engineer for the construction (four of them from private firms and in two teams, our own men);

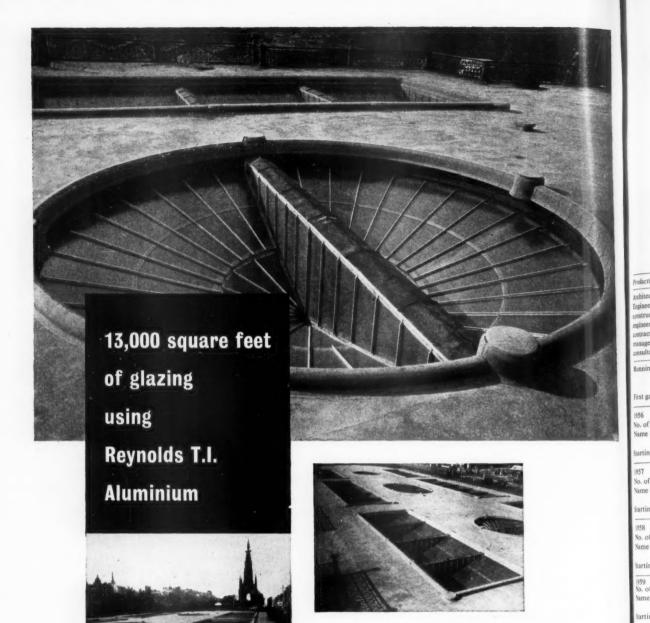
(c) an engineer for building research in our service;

(d) a contractor (we chose six contractors working more or less regularly for us and just then carrying out a big housing project); and

(e) a management consultant (three of them from private firms; and in the last three teams to start—the head of the planning and organization department of our service).

In order to co-ordinate the work of the six teams, all of them were led by one of the leading members of our service.

Every contractor was chosen on the understanding that we were not obliged to allocate the building of 500 dwellings to him every year; we took for granted



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that a contractor having co-operated in preparing a plan adapted to his equipment and ready to start exactly at the moment that the first workers and machinery were free, could organize the work in a very efficient way with both parties to the contract benefiting financially. If, however, a contractor would abuse his favoured position and submit a price which according to our opinion was too high, we were free to drop him and to réturn to open or selective tendering. Up till now this has only once been necessary.

Of the sites which have become or will become available we have chosen those where groups of at least 500 dwellings could be built for working-class people and we made a *total scheme* for the teams. (See Fig. 4.)

Production team	I	II	111	IV	V	VI
Architect Engineer, construction engineer, research contractor, management consultant	Names of	of the persons	involved			
Running work:* First gang ready:	(1) 560 dw. Hillegers- berg I 1.7.56	(1) 540 dw. Hillegers- berg II 1.9.56	(1) 480 dw. Pendrecht IV en V 1.1.57	(1) 624 dw. Hoogvliet I 1.11.57	(1) 770 dw. Pendrecht VI 1.10.57	(1) 304 dw. Zuidwijk III 1.12.57
1956						
No. of dwellings Name of job	(2) 586 dw. Pendrecht VII	(2) 546 dw. Zuidwijk VIII				
Starting date	1.7.56	1.9.56				
1957						
No. of dwellings Name of job	(3) 568 dw. Schiebroek	(3) 500 dw. Hoogvliet	(2) 561 dw. Zuidwijk VIII	(2) 864 dw. Hoogyliet	(2) 500 dw. Schiebroek	(2) 582 dw Westpunt
Sarting date	1.8.57	1.10.57	1.1.57	1.11.57	1.10.57	1.12.57
1958						
No. of dwellings Name of job	(4) 470 dw. Schiebroek	(4) 500 dw. Hoogyliet V	(3) 500 dw. Hoogvliet VI		(3) 500 dw. Schiebroek IV	
Starting date	1.9.58	1.10.58	1.1.58		1.10.58	
1959 No. of dwellings Name of job	(5) 500 dw. Lombar- dijen I	(5) 500 dw. Hoogyliet VIII	(4) 500 dw. Hoogyliet IX	(3) 500 dw. Hoogyliet	(4) 500 dw. Lombar- dijen II	(3) 500 dw. Zalmplaat
sarting date	1.9.59	1.10.59	1.1.59	1.9.59	1.10.59	1.1.59
			(5) 500 dw.	(4) 500 dw.	(5) 500 dw.	(4, 5) 1,000 dw.
			Hoogvliet XII	Hoogvliet XIII	Lombar- dijen III	Oudeland
			1.1.60	1.9.60	1.10.60	1.1.60

* Not prepared by a team

ST

Fig. 4. Table showing the allocation of schemes to the various design teams, the number of dwellings in each and the date when the team was to start. An example of the programme for a particular scheme (project 3, by team 1) is shown in Fig. 5.

Each job for a team had to be prepared in such a way that the allocation could take place on a certain date, e.g., project 3 of team 1 should be allocated on August 1, 1957. When on October 1, 1956, an overall plan was made for the preparation of this work it was as shown in Fig. 5.

These overall plans for the preparation of the work are followed up by working schemes for the execution of the work and everybody involved has to base the planning of his particular job on these plans and schemes. The architect and the engineer for the construction know exactly when every drawing and every calculation must be ready and the contractor can place his orders for the delivery of materials at the right place and at the right time and also arrange with the sub-contractors.

This framework for the preparation of housing projects looks rather rational and even simple. Nevertheless it must be said that it took some time for the municipal authorities to grow familiar with the idea of direct placing of contracts instead of the tendering procedure, and with the fact that their time for judging and approving the projects was also limited by the "overall plan." Therefore we try to seize every opportunity to give information about the projects beforehand.

As for the proper teamwork one may also say that it is just plain logic to work on the base of an overall plan. In practice, however, it makes all the difference if a plan is not made from the beginning to the end, but from the end to the beginning and with the absolute knowledge that the end cannot be postponed.

From our experience after the preparation of a number of projects we can say that about ten meetings of the team are needed to prepare a good plan. It is impossible to give a full account of these meetings, so we will give some main points about them:

(a) At every meeting the progress made should be checked; then the work which follows has to be discussed and divided between the members of the teams; often a task is given to two or three members in cooperation; all dates of meetings are fixed.

(b) Details of interest for one or two members of the team only should be left to the persons involved; only main points within the field of different members need discussion in the team. This principle may be shown in the following way.

Formerly everybody worked separately like this:



Teamwork does not mean:



For satisfaction year after year - specify the



No matter how many homes are involved, standard specification of the Bilston Atlanta ensures constant satisfaction. Its brilliant enamel finish remains unimpaired year after year! The Bilston range includes the exact colour required for any decorative scheme. Specify the Atlanta - it costs no more than an ordinary bath.

Bilston Baths

Atlanta e Magna . Cresta . Marina . Mermaid . Bermuda e

for any bathroom, large or small! As well as the 66". the Atlanta comes in 54". 60", 61" (available in two widths), and 72" lengths.

The Atlanta 54, 60 and 61 must be preferred to any other baths of these sizes because they are exact replicas of the full size bath, scaled down to small proportions.

Atlanta flat bottom helps to prevent slipping . . . ensures comfort.

for young and old. The Atlanta can be fitted to give an overall height of only 16".

With the Atlanta, taps can be fitted in three different positions to meet all possible requirements.

Corner tap mounting facilitates installation and maintenance.

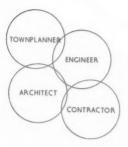
The Atlanta is supplied with or without overflow. with or without handgrip.

BATH

BILSTON FOUNDRIES LTD . BILSTON . STAFFORDSHIRE . Illustrated literature is available on request.

technical section

Teamwork means co-operation in the overlapping parts of everybody's task, but every member of the team keeps his own responsibility within his field where it is not overlapped by another.



(c) It is the teamleader's task to circumscribe everyone's duties, to lead the discussions (keeping to the
main points) and to have light thrown on the different
points of view and interests. After that a conclusion
must be drawn, if necessary by the team leader himself. We must take care not to neglect imponderables
(e.g., external appearance of a house or grouping of
rooms) in favour of things that can be counted in
money or working hours. The team leader's task requires much preparation and great help from an expert secretary, assisting at the meetings.

It goes without saying, that results were only gradually reached and there is still much to be improved. We thought that the contractor could tell us exactly which were the demands for an efficient project. He could not, for he had never met such a project. It had to be discussed with the architect, the engineers and the contractor; the management consultant had to give information and to encourage a certain way of approaching the problems. Then it was soon dis-

Fig. 5. The programme of work for project 3 to be carried out by team 1. Each of the "operations" was further broken down, for example the drawing office work was programmed in detail.

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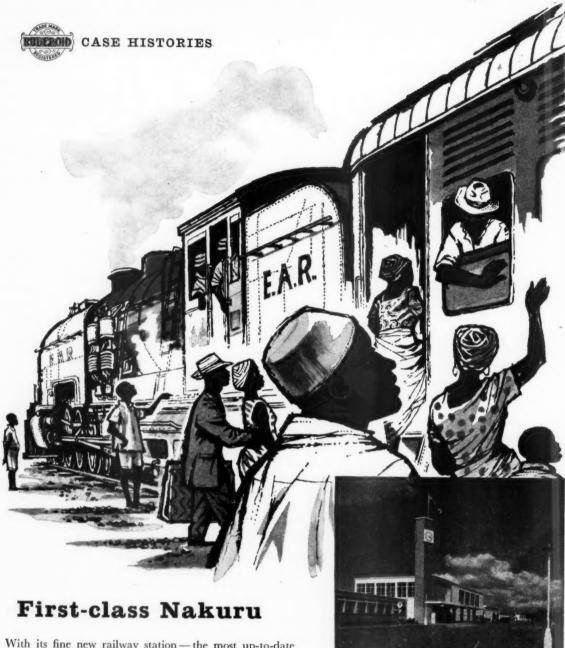
covered that the town planner could not be missed from the teams

The situation, the number, the length of building blocks, the number of dwelling-types are so important, that a wrong choice of them can make it impossible to have well-organized building projects. To get the most efficient use of shuttering it should be made possible to use shutters several times over. The task and the strength of different gangs must be tuned to each other and to the speed of the total work; organization of the work can be made difficult by an inefficient number of dwellings of a certain type. Of course it takes time to gain knowledge and insight into these questions and to convince the town planners of the necessity of our demands. These demands do not mean monotonous neighbourhoods and endless repetition, but working with different units, which have their own possibilities.

Also in the field of construction much was gained. It proved to be very useful that a contractor could say to an architect: "You designed this or that, but how should I make it? If you could be content with a slightly different form like this, it will cost only half." Speaking about results, there is a general point first: everybody concerned realizes more and better the influence of his work on the work of others, a better understanding has grown. We learned to say: we are building those houses, instead of I am doing it. Moreover it is generally recognized that a steady rate of work is very conducive to higher productivity. In this respect the following is remarkable. In 1954 the number of dwellings under construction in Rotterdam rose-for a very short time-to 7,000, and 4,500 men were working on them; every contractor complained of lack of manpower and the jobs went slower than had been planned. Now in 1957 the number of dwellings under construction increased from 7,000 in January to 8,000 in October; not quite 4,000 men are working on them and nobody complains, everything is going smoothly.

We hope very much to be able to build, not only sufficient houses, but also houses of high quality which will stand for a long time. After all, we cannot lose sight of their importance to domestic happiness.

1 - 3	OCT. NOV.		W. DE		DEC.		١.	FEB.		MARCH		APP	APRIL			JUNE	INE	JULY		AUC	2.	
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Definite design		V/////////////////////////////////////																				
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Beginning of the work																						



With its fine new railway station—the most up-to-date in East Africa—the town of Nakuru can welcome the world. Until very recently a few old sheds of wood and tin stood in for a station in this flourishing East African town, centre of Kenya's Rift Valley agricultural area. To Ruberoid Contract Agents went the contract for the supply and fixing of some 40,000 square feet of Ruberoid Roofing for the new building, designed by the Chief Architect, East African Railways and Harbours Administration.

Nakuru's pride and joy. The Ruberoid Contract Agents Messrs. Naumann, Gepp (East Africa) Ltd. were responsible for all roofing. Ruberoid Contract Departments throughout the British Isles and Contract Agents overseas offer the benefits of expert advice at the planning stage and skilled craftsmen to execute the work.

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RUBEROID

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THE RUBEROID COMPANY LIMITED, 343 COMMONWEALTH HOUSE, 1-19 NEW OXFORD STREET, LONDON, W.C.I.

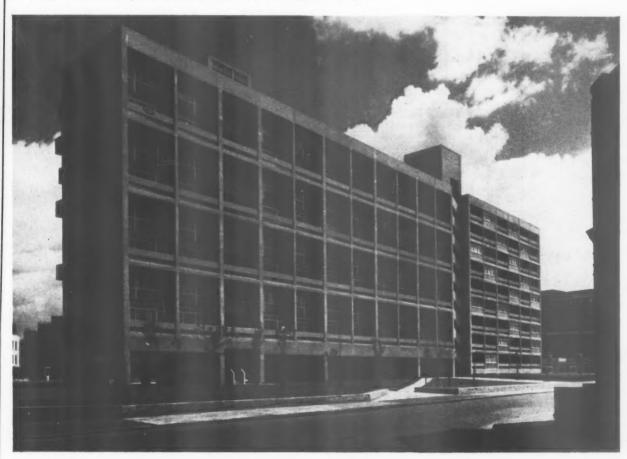
building illustrate

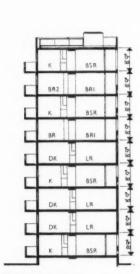
FLATS and MAISONETTES

for St. Thomas's hospital; in Royal Street, London, S.E.I; designed by Leslie G. Creed assistants robert maxwell, William Brown, Michael Davies consulting engineers felix J. Samuely and Partners; quantity surveyors Franklin and Andrews

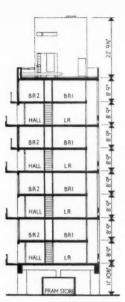
It is a rare and surprising occurrence for a hospital authority to carry out low-cost housing, and it is gratifying to find the result to be so much better than much local authority work. St. Thomas's is to be congratulated for supporting a progressive policy in architecture. Unfortunately, this is yet another housing scheme on which cost figures are not available for publication and it makes us wonder why it is that costs are readily given for schools, churches, private houses, factories and almost every other type of building but housing. One should expect less reluctance in the case of buildings subsidized by public money, which at least ought to be money well spent.

The block from the south-west, with the maisonettes on the left and the flats on the right.





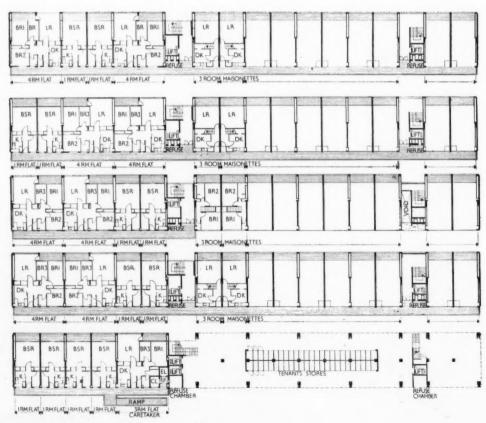
Section through flats [Scale: $\frac{1}{38}$ " = 1' 0"]



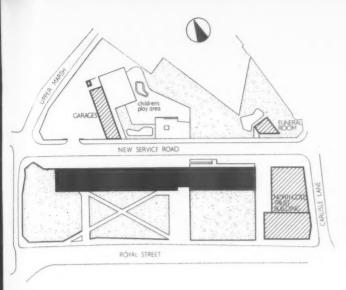
Section through staircase

The location of the block can be clearly seen from this aerial photograph taken from the south-west (opposite page), with Waterloo main line station top right and the Festival Hall extreme top. The private balcony side of the block faces directly on to the park and further (out of view) on to the Lambeth Palace gardens,

Site plan



Floor plans [Scale: 48" = 1' 0"]



Site plan

the



analysis

CLIENTS REQUIREMENTS

To make room for the development of St. Thomas's Hospital and the realignment of Lambeth Palace Road a number of old terrace houses will have to be demolished. The scheme is intended to provide accommodation for the people living in these houses. The housing site was itself originally covered by similar terrace houses and a soap works, but these were destroyed during the war, with the exception of one house which was subsequently used as a social centre by the Northcote Trust. A new social centre had to be erected before the old one could be demolished to permit the remainder of the development to be started.

PLANNING AIMS

The block has been conceived as part of the comprehensive layout for the extended St. Thomas's Hospital and was included in the original plan prepared by Sir William Holford and illustrated in the AJ for July 30, 1953. For this reason, although mixed sizes of dwellings were required, a single slab type block has been employed sited parallel to Royal Street with the living rooms overlooking the Archbishop's park and Lambeth Palace Gardens.

SCHEDULE OF ACCOMMODATION

		No	of re	ooms	7	Total	Total no.	
Type No. of Mixed 9	I 2 20		3 41	4	dwellings 77	rooms 207		
Room areas	LR		DK		BRI	BR2	BR ₃	
Maisonettes	179		86		123	117		
4-room flats	194		90		132	105	72	
1-room flats	200		58		_	-	-	
Floor to floor	height:	8 f	t. 9 ir	1.				
Room height (finishe	d): 8	ft.					

SUMMARY

Area of site prior to road widening: 1.6 acres.

Add ½ public roads up to 20 ft.: 0.2 acres.

Area of site available for housing: 1.8 acres.

Total number of dwellings: 77.

Total number of rooms: 207.

Number of persons per room: I · I.

Density dwellings per acre: 43.

Persons per acre: 126.

Number of tenant stores: 50.

Number of garages: 7.

Ground floor area (of accommodation): 8,370 sq ft.

First floor and above: 63,222 sq. ft.

Total floor area: 71,592 sq. ft.

Type of contract: RIBA with combined bills of quantities

and specification.

Drawings: April, 1954, to May, 1955.

Tender date: June, 1956.

Contract signed: September, 1956.

Work began: October, 1956.

Work completed: February, 1958.

Tender price: £209,668.

Net cost per room: £735.

STRUCTURAL ELEMENTS

Work below ground floor level

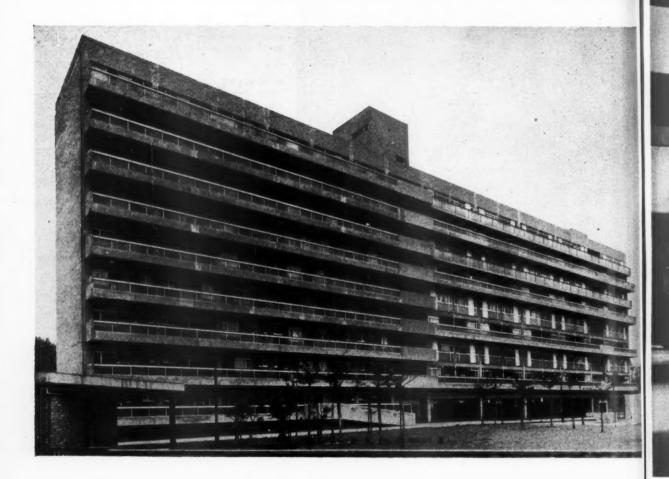
Mass concrete foundations to columns are stepped in 2-ft. 3-in. steps terminating 8-ft. square at depth of 22 ft. on subsoil of mixed clay and gravel. Loading, 21 tons.

building illustrated



There is now a general tendency to integrate access galleries into the building by the use of vertical members often formed, with the balcony fronts, into a pierced screen. But here the galleries are frankly and unashamedly expressed and the whole effect is one of plastic richness, its success being due in fact to the contrasting rhythms of the flat access galleries at every floor level and the maisonette balconies at every other floor level. The escape galleries to bedroom floors above 42 ft. in height project 2 ft. from the face and are more gently treated, with thinner slab edges and handrails. The solid concrete balustrading of the sections of the access galleries at the staircase recessions leaves no doubt as to which is main staircase and which is secondary. The access

galleries to the top floor flats might well have been provided with protection from the elements. Opposite page: glazed underwindow panels are used throughout the private balcony side of the block and to the external walls of the upper maisonette floors on the access balcony side. They are inexpensively detailed to be competitive with cavity brickwork. The cavity behind the glass is well-ventilated and no glass was found cracked despite the fact that no mastic bedding is used as recommended by T. A. Market (AJ November 21, 1957). The panel gives a "U" value of 0-18. On both gable end walls (see below) the floor slabs are continued out to the external face to support the half-brick facing which is candidly expressed as such by its proudness from the column faces.





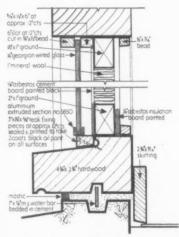
Frame or load-bearing element

On typical floors precast columns and beams are employed with 3 columns in depth of block at 14-ft. 9-in. centres along length of block. "Split" beams are used where ducts and flues have to be carried through.

On the open ground floor beneath the maisonette portion of the block, the alternate face columns are omitted and the load is carried on a beam frame. Concrete surfaces on the face of the building have Cornish granite and Leamoor sand aggregate on the outer surface with a light pick bush-hammered finish.

External walls and facings

(a) Under-window panels to south elevation: \(\frac{1}{4}\)-in, georgian wired rough cast glass with cavity behind vented at top by slotted fixing beads and at bottom by supporting glass on aluminium saddles. Ventilation to cavity was provided to prevent cracking of glass. Back-up panel of \(\frac{1}{3}\)-in, asbestos cement sheet, cavity filled \(\text{I-in}\), mineral wool quilt, and \(\frac{1}{4}\)-in, asbestos insulation board built-up on \(\text{I\frac{1}{2}}\)-in. \(\times\) I-in, wood framing. This construction was used to give light weight.



Section of under-sill panel

(b) External walls on to access balcony: cavity walling 3-in. clinker block, I½-in. cavity, 2-in. clinker block. External face rendered dark grey colour. Internal face plastered anhydrous gypsum plaster. Glazed under-window panels are replaced here, where they would be prone to damage, by rendered cavity walling.

(c) Gable end walls: cavity walling, 3-in. clinker block inner leaf with 4½-in. buff yellow facing bricks supported at every floor by floor slab projection. Concrete cladding was considered here but proved too expensive. U-values: 0.27.

Ratio:
$$\frac{\text{solid walls}}{\text{floor area}} = \frac{0.39}{1}$$

Windows

Wood windows and sills with aluminium weather strips. General use of inward opening lights to facilitate cleaning is somewhat negated by the large fixed lights which are difficult to clean. Inward opening lights have 1-in. × ½-in. aluminium water bars to bottom rail. Secret permanent ventilation slots are provided at heads of windows to conform with LCC by-laws. Cost includes doors to escape balcony

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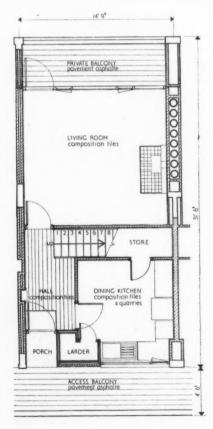
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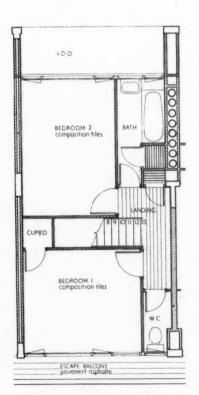
building illustrated



Opposite page: the maisonettes are handed to share a common duct and flue wall and this is expressed on the external face by the wider column, which, substantially increased in depth but not in width, is carried down to the ground, the intermediary columns being carried on the deep skirt beam. Columns, beams and balcony fronts are precast, and bush-hammered with plain margins, the bush hammering exposing the Cornish granite and Leamoor sand aggregate giving an excellent finish. In-situ surfaces are similarly treated; junctions between in-situ and pre-cast members show in places, but this is difficult to avoid. The in-situ concrete paving is divided into large slabs which scale well with the building. The name is one of the few details in which the bold scale evaporates.

On the private balcony side the flats are firmly divided from the maisonettes by the strong rhythm of the main staircase (left). The four-room and one-room flats have been ingeniously planned in equal bay widths, two to a four-room and one to a one-room, and are juxtaposed differently from floor to floor to produce a random pattern on the external face without forcing the plan. The only disadvantage arises in that many four-roomers are adjacent to the stair and suffer loss of privacy from people walking past the one bedroom which must of necessity occur on the access balcony side with a four-room dwelling of this type. Space and water heating are by solid fuel; fuel stores are situated below the larders.

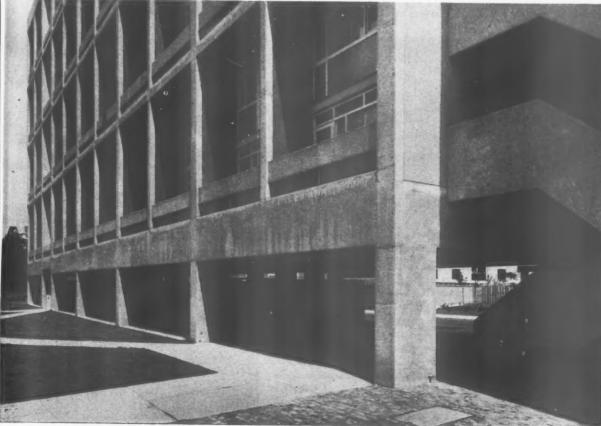




Typical floor plans, maisonettes [S

[Scale: #" = I' 0"]



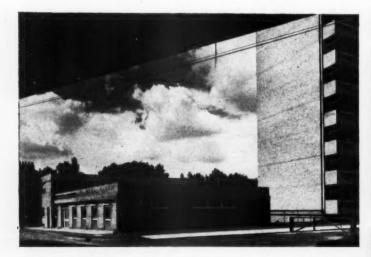


building illustrated



On multi-storey housing estates, ancillary buildings are a difficult problem, particularly in treeless urban areas where all too frequently these small structures look flimsy afterthoughts overpowered by their larger neighbours. Here the garages, the boundary walls, the designed-formwork pattern screen wall and bird bath exhibit a solidity and robustness which make them

particularly successful in this respect. Another difficult problem is the "left over" areas, the ground area which is not doing anything; many of these remain unsolved. The grassed areas on this side of the block are flush with the paved areas which not only makes them difficult to mow but means that they will quickly become worn along the edges and at the corners.



Above, the Northcote Trust Social Centre from the north-east. From left to right in the photo, centre right, are the toddlers' room, the crafts room and the senior rest room facing on to the paved court between the social centre and the gable end of the tall block. The two-storey height of the main hall lies beyond the limit of the gable end; this space has been designed to give a flexibility of function (below right). It has to accommodate games, whist drives, dances and numerous other activities. Well run by the resident warden who has a flat on the upper floor, it provides for the social, health and recreational needs of the area.





The N indeed block

This is housing stores.

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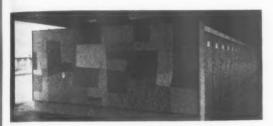
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The Northcote Trust Social Centre seen from the south. It is indeed an achievement that it is in no way dwarfed by the tall block close behind.



This mosaic mural faces the two lifts on the ground floor of the housing block and forms a solid end to the two rows of tenants' stores. It was designed by Malcolm Hughes.

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The photograph above shows an unusual ancillary building for a housing estate—a funeral room, presumably to separate the dead from the living as quickly as possible, a hygienic thought if a somewhat sombre one, particularly for the old persons occupying the ground floor one-room flats, who when looking out of their windows can truly say their end is in sight. Still, it was a requirement of the client; it had to be separate from other buildings and it had to be on the access road in a suitable place for the funeral cortege to draw up. It has been designed in a restrained way with 9-in. external walls which are non-load bea ing and separated from the roof slab by deeply recessed strip windows continued around all three sides. No windows open, permanent ventilation at each corner is provided by 9-in. × 3-in. airbricks. The concrete roof is supported on four naked steel cruciform columns each welded up from four 4-in. × 4-in. m.s. angles. The fascia to the concrete roof is bush-hammered with plain margins as in all the ancillary buildings, and this, with the same yellow buff brick, identifies them with the parent building. Inside, the brick walls are fair-faced and painted, the floor grano screeded and in the centre on the apex axis is the catafalque.

analysi

External doors

Entrance doors to dwellings, 1 ½-in. BS, 459 ply-faced flush, in softwood frames.

Fire escape doors to staircase landings, 1\(^7_8\)-in. solid afrormosia.

Tenants' store doors, framed ledged and braced.

Upper floors

6½-in. hollow pot concrete floors to all dwelling floors.

Span: 14 ft. 9 in. Area: 63,222 sq. ft. Superload: 40 lb./ sq. ft.

Staircases

For escape purposes only: precast concrete flights and balustrades. The latter are cored by 5 ductubes per section to reduce weight and facilitate lifting into place by tower crane travelling on the opposite side of the block.

Finish, I-in. granolithic with carborundum on treads, \(\frac{3}{2}\)-in.\(\frac{3}{2}\)

Landings cast in-situ r.c. finished 2-in. granolithic.

No. of staircases: 2. Widths: 2 ft. 6 in. Total rise: 82 ft. 4 in.

Height from floor to floor: 8 ft. 9 in.

Internal maisonette staircases: softwood 1-in. treads,

in. risers.No. of staircases: 41.Width: 2 ft. 6 in.

Floor to floor height: 8 ft. 9 in.

Roof construction

 $6\frac{1}{2}$ -in. concrete hollow tile slab, finished $\frac{1}{2}$ -in. screed on 2-in. (average) vermiculite laid to falls, $\frac{3}{4}$ -in. two coat asphalt. Area of roof: 8,392 sq. ft.

Glazing

26-oz. drawn sheet.

32-0Z.

Size of lights restricted to safe glazing sizes of 32-oz., to reduce costs,

Obscured glass for bathrooms and w.c.'s.

 $\frac{1}{4}$ -in. georgian wired polished plate fire doors with $\frac{1}{2}$ -hour standard to staircases.

Balcony fronts

Private balconies: precast concrete Cornish granite and Leamoor sand aggregate, with bush-hammered finish, and georgian wired glass panels in metal frames.

Access balconies: pressed metal frame capped with teak handrail, with 4-in. georgian wired glass in metal frames.

PARTITIONS AND FITTINGS

Internal partitions

2-in. and 6-in. clinker block.

Separation walls between dwellings of 3-in. clinker block, cavity, 3-in. clinker block, to give by-law 2-hour standard of fire resistance and sound insulation.

Internal doors

Ply-faced both sides, flush, constructed in accordance with BS450.

r \S -in. thick in softwood frames. Sizes, 6 ft. 6 in. \times 2 ft. 6 in. generally, 6 ft. 6 in. \times 2 ft. for w.c.s and bathrooms

Sliding doors to kitchens, on overhead track.

No. of single doors, 901. No. of sliding doors, 77. No. of double doors, 69 (incl. cupd. doors).

analysis

Ironmongery

Lever locks and latch sets of satin anodized aluminium.

Fittings

EJMA standard softwood kitchen units.

FINISHES

Floor finishes

Location

Separation floors

\$\frac{1}{2}\tau\$-in. thermoplastic tile on \$1\frac{3}{4}\tau\$-in. \$1:3\$ cement and sand screed, reinforced with chicken wire on \$\frac{3}{4}\tau\$-in. mineral wool quilt. \$46,359\$ sq. ft.

Intermediate floors to maisonettes

15,867 sq. ft.

Private balconies

Type of finish

\$\frac{1}{2}\tau\$-in. thermoplastic tile on \$1\frac{3}{4}\tau\$-in. mineral wool quilt. \$46,359\$ sq. ft.

\$\frac{1}{2}\tau\$-in. thermoplastic tiles on screed.

15,867 sq. ft.

2 layer asphalt on screed to falls.

4,239 sq. ft.
Access balconies 2 layer asphalt on screed to falls.
6,741 sq. ft.

Wall finishes

§-in. 2 coat gypsum anhydrous plaster, internally.

Ceiling finishes

}-in. plaster.

Roof finishes

½-in. cement and sand screed on 2-in. minimum vermiculite laid to falls, ¾-in. 2 coat asphalt.

Decorations

Ceilings and walls, 2 coats emulsion: joinery, 4 coats oilbound gloss.

SERVICES

External plumbing

One pipe system 3½-in, c.i. and 2-in, c.i. vent stack with copper branches and anti-siphon branches.
4-in, c.i. r.w.p.'s carried in internal ducts and concealed in columns on ground floor.

Hot water installation

Copper tubing. Hot water and space heating by openable stove, with copper back boiler serving 30 gall. nominal cylinders in linen cupboards, with 2-kW immersion heaters for summer use. Cylinders fed from 12-gall. break tanks. Solid fuel for the stove is stored in a metal hopper beside the front door, with external access for the coalman.

Cold water installation

3-in. company main in ground to main staircase branching off to risers in internal plumbing ducts as rising main. Down services to baths, basins and w.w.p.s distributed along horizontal duct on roof and dropping down in ducts. Storage tanks on roof, 5,000 gall. nominal capacity.

Sanitary fittings

Type of fitting	No. of each type
22-in. × 16-in. lavatory basins	77
w.c. suites with black plastic cisterns	77
and seats c.i. vitreous enamelled sink and drainer	
units	77
C.1. vitreous enamelled baths	77

Gas installation

3 points per dwelling.

Cost includes connection to gas lighter for openable stove.

Electrical installation

p.v.c. in screwed conduits 415:240 volts 3 phase, 4 wire, 50 cycle AC distribution. Intake room at foot of each escape staircase.

cooupe ocurrence.	
Type of point	No. of each type
Light points	609
Switch points	763
Power points	515
Cooker points	77
Public lighting	127

Drainage

Combined system. Soil drains in stoneware. c.i. under block and roadways.

Lifts

8 person (1,200 lb.) 100 ft. per minute, passenger operated. Twin lifts are fitted with down collective control with stops at alternative floor levels. A shelf and protective panel in car is provided for use by coal men. Motor rooms in roof superstructures.

Number of lifts: 3 (two at main staircase, one at secondary staircase).

Refuse disposal

15-in. internal diameter salt-glazed stoneware surrounded by concrete.

Standard metal hopper inlets at each floor level.

Number of containers: 4.

Number of chutes: 4.

SITE ORGANISATION

The contractors are well known for their high standard of site organisation and mechanisation, particularly applied to tall blocks of flats. At their request practically the whole of the structural framing members, the staircases and the balustrading were changed by the architect and the structural engineer from in-situ to on-site precast units, so designed that they could be lifted into position by the tower crane. The G.25 tower crane with its track laid on the access gallery side gave entire site coverage and no scaffolding was used. Two 10 cwt. electric high speed hoisters were used by the finishing trades. Considerable preplanning with progress detailed down to a daily programme. Weekly targets were given to each trade and bonus paid accordingly. The whole contract was completed in 16 months—3 months ahead of the contract date.

CONTRACTORS

Clerk of Works: A. E. Sainsbury. General contractors: Wates Ltd. Sub-contractors: Demolition: G. E. Cloke Ltd. Asphalt: Ragusa Asphalte Paving Co. Ltd. Bricks: R. Passmore & Co. Slate sills: Bow Slate and Enamel Co. Partition slabs: Oake's Bros. Ltd. Glass: Faulkner, Greene & Co. Ltd. Patent flooring: Semtex Ltd. Stoves Caledic Stoves. Lane & Girvan. Gas fitting: North Thames Gas Board. Electric wiring and light fixtures: F. H. Wheeler & Co. Metal balcony fronts: Clark Hunt. Plumbing: Faithful Bros. Door and window furniture: Yannedis & Co. Sanitary fittings: Stitson Ltd. Dust shutes: Broads Manufacturing Co. Ltd. Storage tanks: Newton Chambers. Joinery: Rippers Ltd. John Sadd & Sons Ltd. Tiling: H. N. Nutman. Signs: The Lettering Centre. Paint: International Paint.

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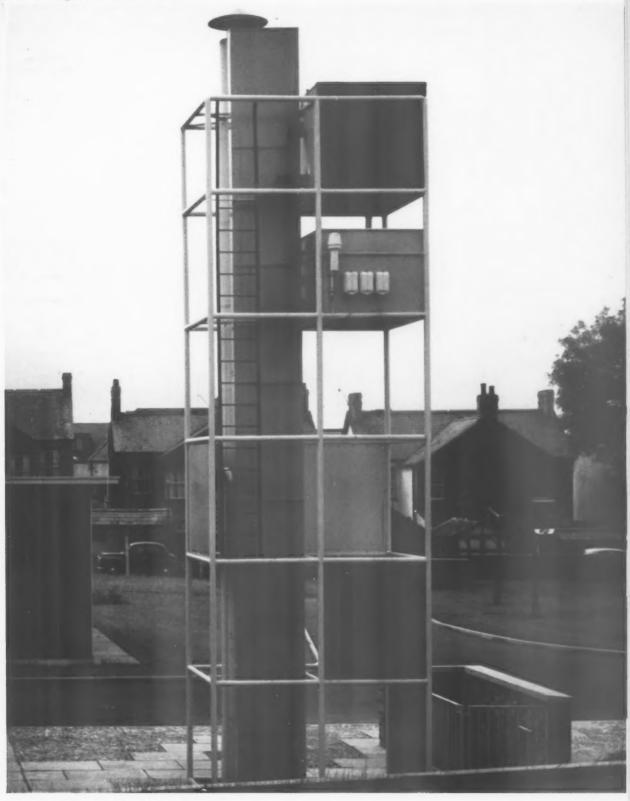
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working detail

WATER TOWER: SCHOOL AT PYLE, GLAMORGAN

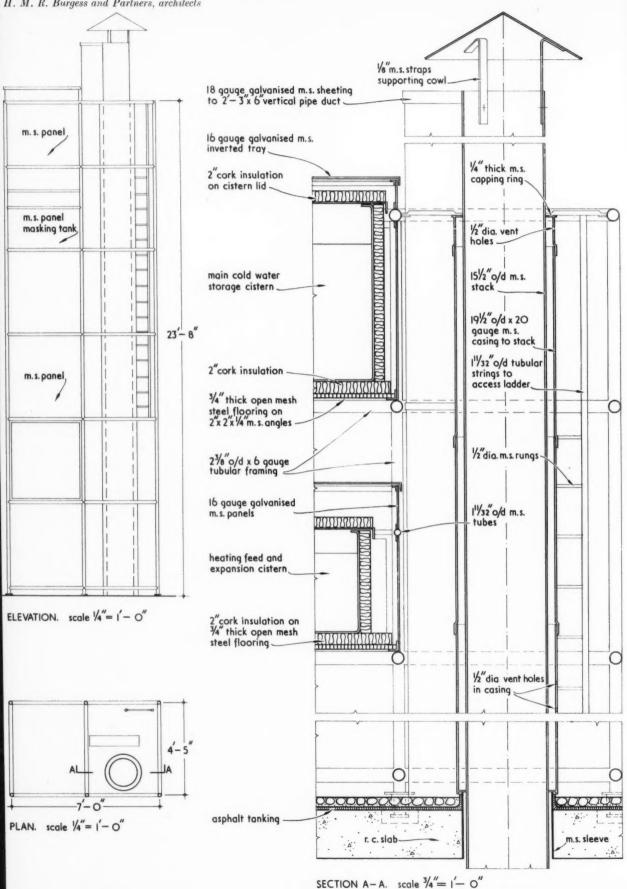
H. M. R. Burgess and Partners. architects



The cisterns are supported on open-mesh steel flooring held in angle frames inside the tubular framework. The galvanised mild steel panels concealing the cisterns and filling in the framework at intervals are finished in random colours.

WATER TOWER: SCHOOL AT PYLE, GLAMORGAN





COOKER EXTRACT HOOD IN COMMUNITY CENTRE: FLATS IN LONDON, E.C.1

Chamberlin, Powell and Bon, architects



This circular hood in galvanised sheet steel is made in three sections riveted together and incorporates a bulkhead light fitting at the centre.

EXISTING

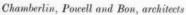
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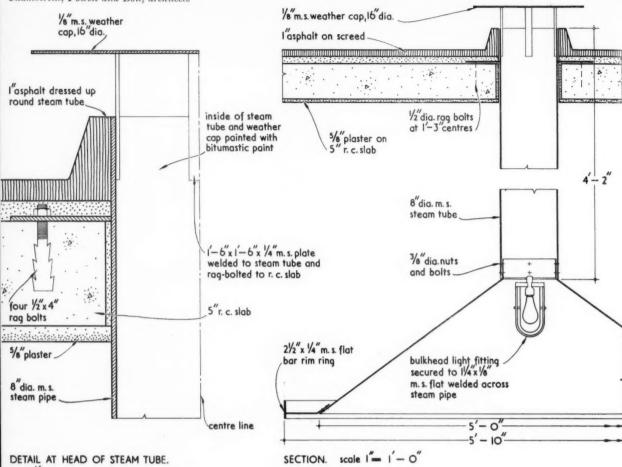
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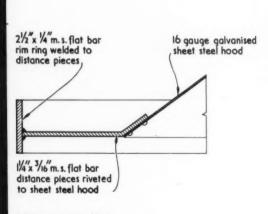
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COOKER EXTRACT HOOD IN COMMUNITY CENTRE: FLATS IN LONDON, E.C.1

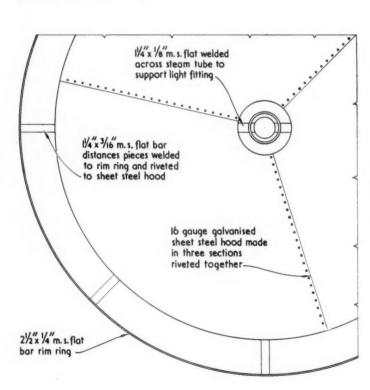




scale 1/4 full size



DETAIL OF RIM RING. scale 1/4 full size



REFLECTED PLAN. scale I'' = I' - O''

BROUGHTON MOOR LIGHT SEA GREEN STONE

FRAME-SAWN FINISH

New Central Police Headquarters, Hull

(Architects: Messrs. Priestman & Lazenby)

IDEAL STANDARD RAYRAD Nº45. BROUGHTON MOOR LIGHT SEA GREEN STONE FACING SLABS I" THICK FRAME SAWN ON FACE HEATING PIPE DUCT FILLED WITH DRY FOAM SLAG. WOOD BLOCK FLOOR FINISH ELEVATION (IN: 12'0" WIDE BAY) EXISTING BASEMENT PLAN ON X - X WALL. UNIVERSAL SECTION METAL WINDOWS CERAMIC TILE CILL COPPER CRAMPS FOR STONE SLAB FIXING. PRE DRILLED HOLES INTO 9" BRICK PANEL WALL COPPER 'S' CRAMPS TO ALL HORIZONTAL STONE JOINTS. COPPER CRAMP. CEMENT MORTAR DABS. VERTICAL STONE FACING SLABS REBATED INTO SLATE PLINTH COURSE AT GROUND FLOOR LEVEL

Broughton Moor Green Stone is ideally suitable for use both as internal and external facing, and remains sound for centuries. It can be supplied in a variety of beautiful finishes, including frame-sawn, sanded, fine rubbed or naturally riven. It was these characteristics which caused it to be chosen for the facing of this impressive building.

Fixing is normally effected by means of non-ferrous cramps and dowels, grouted into drillings in the stone, and brickwork or concrete. The method of fixing employed in this instance is shown here.



Method of fixing Broughton Moor Light Sea Green Stone Slabs, with frame-sawn finish, I" thick, and in sizes ranging from 3' 6" x 2' 0" to 2' 0" x 2' 0". Approximate area of slabs supplied—12,500ft. sup.

THE BROUGHTON MOOR GREEN SLATE QUARRIES LTD.,
CONISTON, THE LAKE DISTRICT, LANCASHIRE
Telephone: Coniston 225

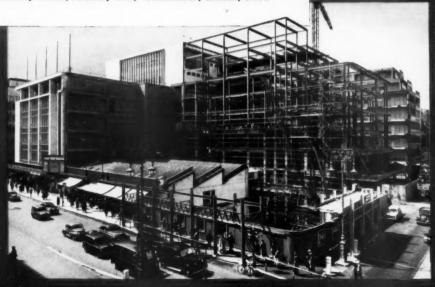
The new JOHN LEWIS Store

This great store, which will cover an important island site adjoining Oxford Street, is being built in six stages, so arranged that the maximum business use can be made of the site while construction proceeds. The first stage is shown completed in the left of the lower photo.

Architects: Messrs. Slater & Uren, F/F.R.I.B.A.
Consulting Engineers:
Messrs. Hurst, Peirce & Malcolm, M/M.I.C.E., M/M.I.Str.E.

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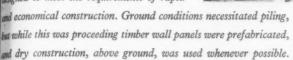
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AILWAY STATION AT WHITLAND, CARMARTHENSHIRE

This Western Region station at Whitland, near Carmarthen, has been rebuilt to a design by H. E. B. Cavanagh, the regional architect, under the direction of M. G. R. Smith, chief civil engineer of the Western Region. The building system was specially designed to meet the requirements of rapid



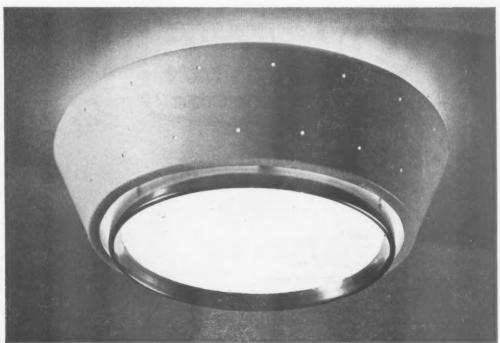


The decoration of the public rooms relies on the inherent colours of tiling, plastic and stainless steel. Above, a general view, and below, the booking hall and a platform refreshment room.





Noel VILLENEUVE design



A standard fitting in three sizes: 101", 132" and 20" dia.



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Oct., 1947-June, 1958

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Announcements

PROFESSIONAL

Derrick Rigby Childs, whose change of address was announced in the AI for August 7, asks us to make it clear that this is a domestic change; his office address remains at 33, Welbeck Street, London, W. (telephone Welbeck 1682).

TRADE

Messrs. Saunders & Co. announce that, owing to the approaching demolition, prior to rebuilding of their premises at 7, Carteret Street, S.W.1, the offices will be permanently closed from August 25. After that date, please address all communications to Leslie Saunders, F.R.I.C.S., "Uplands," 40, Granard Avenue, Putney, S.W.15.

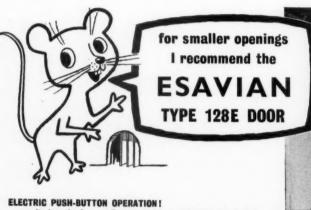
Holcon Ltd. have moved their offices to 21, Mackenzie Street, Slough, Bucks (telephone Slough 25431/2).

Leaderflush (Doors) Ltd. have appointed H. R. Paul & Son Ltd., Broad Street Barry, Glam. (telephone 148), to act as sole distributors of Leaderflush doors for Monmouthshire, Glamorganshire, Camarthenshire, Brecknockshire, Radnorshire, Pembrokeshire and Cardiganshire.

Philips Electrical Ltd. have appointed H. B. C. Woodcock as lamp applications engineer for their Midlands Region. He will be based at Regional Headquarters, Birmingham.

Correction

We regret that the Working Detail published 31.7.58 (Entrance Door, Factory in London, E.8) was incorrectly numbered as Doors: 35, instead of Doors: 36.



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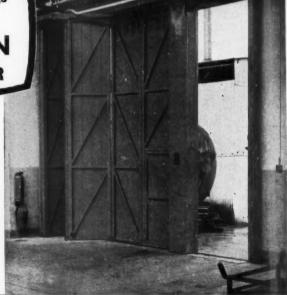
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itects:

The lighting equipment, concealed by the grid, comprises a modified form of Atlas trunking, complete with appropriate fluorescent fittings, gear and tubes, suspended from the true ceiling. Atlas Sylvalume is very quickly and easily installed in an almost endless variety of patterns. It is also easy and economical to operate.

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For hotels, hospitals, schools and in large commercial buildings "Rufflette" Double Track is the ideal curtain suspension system.



TRACK LENGTH

This diagram shows the beautifully designed lines of the track providing dust-free housing for the internal components.



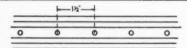
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These gliders are made in nylon to give a high degree of efficiency with a minimum of noise. Curtains hang from the eyes attached to the glider.



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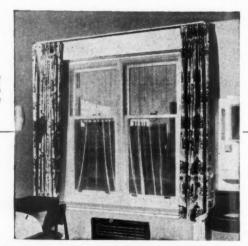
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Holes of $\frac{1}{16}$ " diameter are drilled at intervals of $1\frac{1}{2}$ " along the full length of the Double Track section to facilitate fixing. Face fixing brackets are available if required.



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The single horizontal pulley made in nylon is fitted in this neat housing at the opposite end of the track.

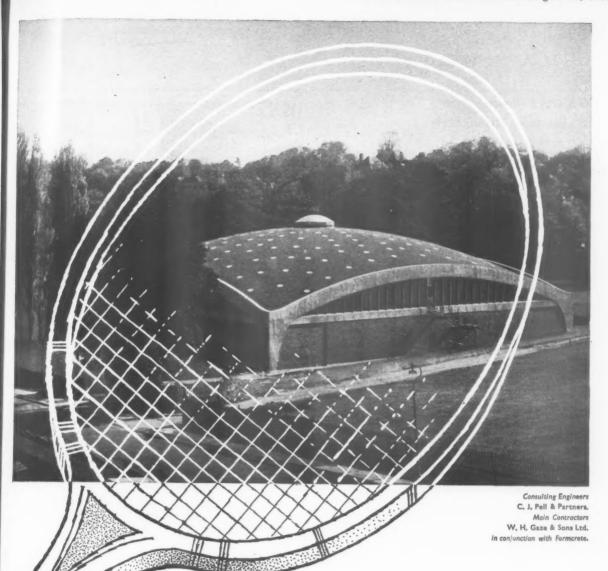


One of the many windows equipped with Rufflette' Double Track at the Strand Palace Hotel, London (by courtesy of J. Lyons & Co. Ltd.)

Full information about Double Track suspension on request to :

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151/864



AUGUST Special Issue The Brussels Exhibition



Japanese Garden; trees, water, sculptured objects and symbolic rocks in the traditional modern garden adjoining Mayekawa's Japanese pavilion.

Neotechnic dinosaur; the gigantic equilibrated structure designed by van Dooselaere and Paduart to celebrate the triumphs of civil engineering.





Turkish Delight; structure, space, light, air and traditional crafts combined in the pavilion by Izgi, Sensoy and Turegun.

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SEPTEMBER



Above: National Water Park, Lymington harbour, one of the small multi-purpose boating centres serving the Solent, whose luture is discussed as a matter of urgency by Geoffrey Robson.



Suspended Ceilings, the conference room of an office block in Rome by Aldo della Rocca, from Michael Brawne's article on the aesthetics of suspended ceilings. (See also A. R. July and September Skill articles.)

Below: Bold Front in Birmingham, a new prestige office block added to an existing factory, by Erno Goldfinger, one of the buildings illustrated and described in this issue.



OCTOBER

Cinema in the Pineta; designed by Eugenio M. Rossi, and sited near the Roman Coast, its design involved some ingenious thinking about late-night ventilation in a close, damp climate.





Brick and Concrete at Ham; a detail of wall, floor-slab, ventilator and gargoyle from a new flatted development at Ham Common by James Stirling and James Gowan.

Air Line Office; a tall black column in the new booking offices of Air France in Bond Street; de-signed by Charlotte Perriand (in colla-boration with Peter Braddock), the first work in England of a designer who assisted Le Corbusier on some of his most famous interior work



The Architectura Review's new standard binding, with shelf. The binding is buckram, and the price of binding per alternate years bound in black and white, and alternate volumes initialled A and R, makes easier the identification of individual volumes, and their proper replacement on the

volume is 25s. Copies to be bound should be addressed, with the appropriate index, direct to the Architectural Press warehouse, Abbey House, 8 Victoria Street, London, S.W.1.

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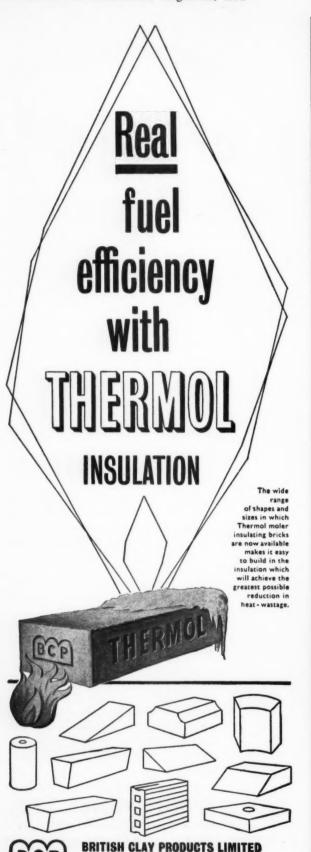
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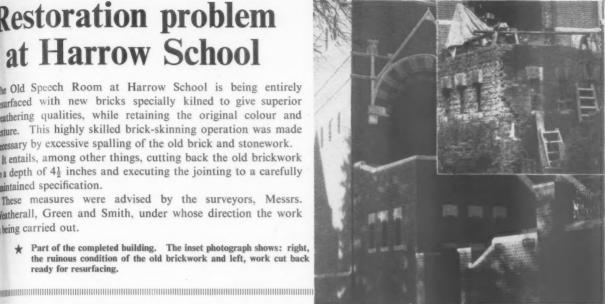
Restoration problem at Harrow School

The Old Speech Room at Harrow School is being entirely resurfaced with new bricks specially kilned to give superior mathering qualities, while retaining the original colour and terture. This highly skilled brick-skinning operation was made necessary by excessive spalling of the old brick and stonework.

It entails, among other things, cutting back the old brickwork to a depth of $4\frac{1}{2}$ inches and executing the jointing to a carefully maintained specification.

These measures were advised by the surveyors, Messrs. Weatherall, Green and Smith, under whose direction the work is being carried out.

* Part of the completed building. The inset photograph shows: right, the ruinous condition of the old brickwork and left, work cut back ready for resurfacing.



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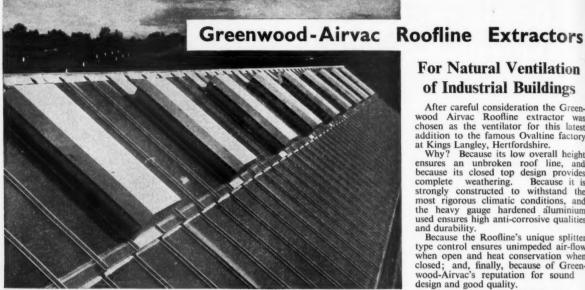




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Photograph by courtesy of A. Wander Ltd, Ovaltine Works, Kings Langley, Herts.

Architect: G. P. Nodes, A.R.I.B.A. Contractors: John Mowlem & Co. Ltd.

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Architect: C. J. Wilkinson, L.R.I.B.A.

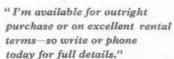


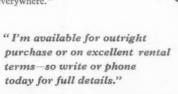
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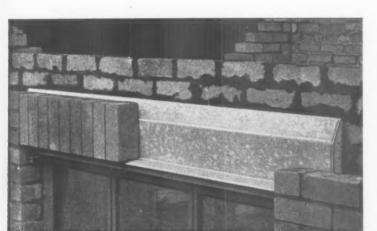
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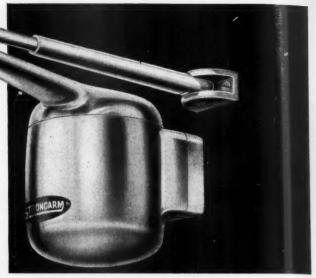
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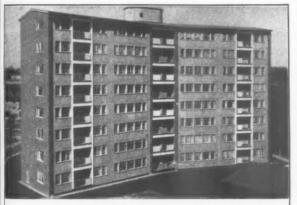


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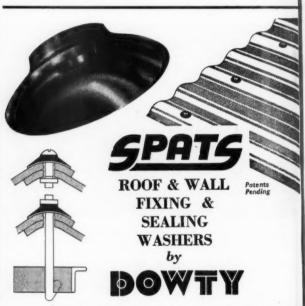
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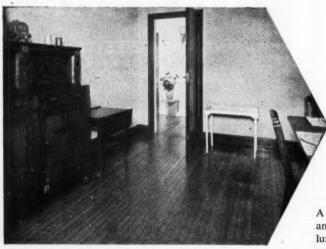


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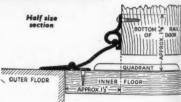
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KENNETH PEARCE, Town Clerk.

Municipal Buildings,
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3Mth July, 1958.

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ASSISTANT QUANTITY SURVEYOR
Salary Scales 2750 by annual increments of
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TECHNICAL ASSISTANT (Architectural)
£575 by annual increments of £30 to £725.
Candidates must be suitably qualified and
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Candidates must be sultably qualined same experienced.

The appointments will be subject to the provisions of the Local Government Superannuation Acts and the National Joint Council's Scheme of Conditions of Service so far as adopted by the Council. Medical examination.

Applications. stating age, qualifications and experience, with the names of two referees, should be submitted to the Borough Architect, 30, Alexandra Street, Southend-on-Sea, by September 8, 1958.

Canvassing will disqualify. Any candidate who is related to a member or officer of the Council is required to disclose the fact.

ARCHIBALD GLEN,

Town Clerk.

1220

LINDSEY LINCOLNSHIBE COUNTY
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Vacancy on the permanent staff for PLAYING
FIELD ASSISTANT Grade II 2725-2845. In
special circumstances consideration will be given
to starting salary above minimum of the grade.
N.J.C. Conditions of Service. Canvassing will
disqualify. Candidates must disclose in writing
whether to their knowledge they are related to
any Member or Senior Officer of the Council.
Applicants to have experience in surveying and
levelling, land drainage, soil treatment and grass
culture.

Application forms from Mr. A. Ronald Clark, A.R.I.B.A., A.M.T.P.I., County Architect, County Offices, Lincoln.

CITY AND COUNTY OF CANTERBURY
Applications are invited for the temporary
appointments of Architectural Assistants, Grade
APT.I (£575-£725).
Applicants must have passed the R.I.B.A. interexamination.
The successful candidates will be engaged on the
design and construction of school and housing
projects. These projects which include a new Technical College, Girls' Technical School Extension
and blocks of four-storey maisonettes, offer considerable scope for initiative and experience, both
in design and construction. Work is likely to extend over a number of years.
The commencing salary will be fixed within the
grade according to ability and experience.
Applications, together with the names of two
referees, must reach the City Architect & Planning
Officer, Mr. J. L. Berbiers, F.R.I.B.A., A.M.T.P.I.,
not later than Monday, 1st September, 1988.

Town Clerk.
Municipal Buildings,
Canterbury.

Municipal Buildings, Canterbury.

URBAN DISTRICT OF FELTHAM
ARCHITECTURAL ASSISTANT
Applications are invited for the appointment of
an Architectural Assistant on the Council's unestablished staff at a salary within Grade A.P.T.
III of the National Scales (2845-21,025 per annum)
plus London "weighting." Applicants must be
suitably qualified.
Forms of application, obtainable from the undersigmed, must be returned accompanied by copies
of two testimonials not later than 29th August,
1958. Canvassing directly or indirectly will disqualify and applicants must disclose, in writing,
whether to their knowledge they are related to
any member of or the holder of any senior office
under the Council.

M. W. COUPE,

M. W. COUPE, Clerk of the Council.

Council Offices. Feltham, Middlesex.

BOROUGH OF BRIDGWATER
BOROUGH ARCHITECT'S DEPARTMENT
Applications are invited for the post of
ARCHITECTURAL ASSISTANT on Salary scales
A.P.T. I or II (according to qualifications and
experience).
Applicants should have passed the Intermediate
Examination of the A.R.I.B.A., and have had
experience of Local Authority housing and
general works.

Examination of the experience of Local Authority nousing general works.

The appointment is subject to N.J.C. Service Conditions, medical examination, Local Government Superannuation Acts, and one month's notice on either side.

Applications to be sent to the Borough Architect. Town Hall, Bridgwater, not later shan Monday, 28th August, 1988, giving full particulars of age, education and experience, etc., and the names and addresses of two referees.

H. A. CLIDERO, Town Clerk.

Town Hall, Bridgwater.

Bridgwater.

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(a) Arthur Street, Chadsmoor—44 houses.

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(c) Pye Green Road/Albert Street, Broomhill—14 houses and 18 bungalows.

(d) Abbey Street and Blewitt Street, Hednesford—6 bungalows.

Interested building contractors should apply to the Council's Architect, Mr. H. Wilcox, A.R.I.B.A., High Green, Cannock, by not later than Angust 30, 1985, for contract documents, and should indicate the site or sites in which they are interested. A deposit of two guineas must be forwarded in respect of each set of documents required, and this will be refunded upon receipt of a bona fide tender.

Contractors may submit tenders for sites (a), (b), (c), or (d) or for all four Contracts, and the Council do not bind themselves to accept the lowest or any tender.

Tenders in sealed envelopes endorsed "Tender for Permanent Dwellings," but bearing no mark indicating the sender must be received by the undersigned by 10 a.m. on September 15, 1958.

Clerk of the Council.

Council House,

The Green,

Council House, The Green, Cannock, Staffs. August 11, 1958.

CITY OF SALFORD
CITY ENGINEER & SURVEYOR'S
DEPARTMENT
Applications are invited for the following new

Applications are invited to the following new posts:—

(a) PRINCIPAL ASSISTANT ARCHITECT: at a salary in A.P.T. Grade V, £1,176—21,325 per annum.

Applicants must be Chartered Architects with wide experience, capable of taking charge of assistant architects and controlling building works from design to completion. Experience of multi-storey dwellings will be an advantage.

(b) THREE ASSISTANT ARCHITECTS: at salaries in Special Grade, £750—£1,030 per annum.

salaries in Special Grade, 270-21,00 per annum.

Applicants should hold at least Parts I and II of the R.I.B.A. final or equivalent and have five years' experience.

(c) TWO ARCHITECTURAL ASSISTANTS: at salaries in A.P.T. Grades I/II £575-£845 per annum.

salaries in A.P.T. Grades I/II 2575—2685 per annum.

Applicants must have passed the R.I.B.A. intermediate examination or equivalent and had some drawing office experience. Facilities for completion of professional training will be given to holders of these posts.

The work of the Department affords experience in a wide variety of municipal engineering and architectural projects carried out for all Committees of the Council.

Housing accommodation will be provided in approved cases.

The appointments will be subject to the provisions of the Local Government Superannation Acts, the National Scheme of Conditions of Service and the passing of medical examinations.

Applications stating age, qualifications and details of experience, together with the names of two referees, should be sent to the City Engineer & Surveyor, Town Hall. Salford, 3, Lancs, to arrive not later than Friday, 5th September, 1958.

R. RIBBLESDALE THORNTON.

R. RIBBLESDALE THORNTON, Town Clerk

R. RIBBLESDALE THORNTON,

Town Clerk.

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Applications are invited for the following posts
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Lower Parliament Street. Nottingham:
S. V-12—ARCHITECT GRADE II—Salary
scale £815 × £30—£1,25.
Candidates should be corporate members of the
R.I.B.A. with varied practical experience.
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GRADE I—Salary scale £715 × £25—£850
(exceptionally £1,000).
Oualifications: Preferably Intermediate
R.I.B.A. although regard will be paid to good
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The architectural work of the department covers
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and recreation buildings.
The point of entry into the salary scale will
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Applicants must have had sound practical experience of the surveying of land and buildings and be familiar with current legislation relating to the acquisition of land. They must have bassed the Final R.I.C.S. Examination or hold a similar oualification.

Salary within scale £750 × £40—£1,030 a year. Commencing salary according to qualifications and experience. N.J.C. Conditions of Service. Further details and application forms from County Architect. Springfield, Maidstone. Closing date September 5, 1958.

1218

GOVERNMENT OF NORTHERN IRELAND ASSISTANT ARCHITECT, CLASS II Applications are invited for a pensionable post in the Ministry of Health and Local Government. Candidates must be registered Architects by examination with general experience and aptitude for research. Duties connected with housing, public health buildings and Town and Country Planning. Salary scale £780 (at age 25)—£1,055 (age 34 and over)—£1,215. Transfer of existing Pension rights may, in certain circumstances, be approved. Preference for ex-Servicemen. Application forms. Obtainable from the Secretary, Civil Service Commission, Stormont. Belfast, should be returned by September 8, 1958.

METROPOLITAN BOROUGH OF FULHAM ASSISTANT OHANTITY SURVEYOR.

8, 1958.

METROPOLITAN BOROUGH OF FULHAM ASSISTANT QUANTITY SURVEYOR A.P.T.I. 2575/2725 + London weighting £20/£30 p.a. according to age. Probationer of an approved professional body experienced in working up and abstracting. Opportunity will be given for site measuring and junior "taking off." Application form from Town Clerk, Town Hall, S.W.6. Closing date 2nd September, 1958.

HARLOW DEVELOPMENT CORPORATION ARCHITECT PLANNER: Frederick Gibberd, C.B.E., F.R.I.B.A., M.T.P.I. EXECUTIVE ARCHITECT: Victor Hamnett, B.Sc., A.R.I.B.A., Dip.T.P., A.R.I.C.S.,

B.Sc., A.M.T.P.I.

B.Sc.. A.R.I.B.A., Dip.T.P., A.R.I.C.S., A.M.T.P.I.
Applications are invited from suitably qualified candidates for the post of ASSISTANT ARCHITECT for work on interesting programme of housing, commercial and industrial buildings which offers exceptional opportunities for candidates with good design ability. Salary within range £753-4939 per annum.

Dwelling accommodation available in approved cases. Applications giving full details and names of two referees to General Manager, "Terlings," Harlow, Essex, within 10 days. 1181

ESSEX COUNTY COUNCIL

ILFORD COMMITTEE FOR EDUCATION Applications are invited for appointment to the following posts in the Education Architects' Section of the Borough Engineer's Office:—

(a) SENIOR ASSISTANT ARCHITECT, A.P.T. Special Grade (£750 × £40—£1.050 her annum).

(c) ASSISTANT ARCHITECT, A.P.T. Grade I (£575 × £40—£1.250 her annum) plus appropriate London Weighting in each case.

The posts are superannumble and subject to medical examination.

Commencing salaries will be fixed within the grades according to experience.

The posts are superannuable and subject to medical examination.

Commencing salaries will be fixed within the grades according to experience.

Applicants for post (a) must be Associates of the R.I.B.A. and have had a minimum of six years' experience in the design and development of school buildings.

Applicants for post (b) must be Associates of the R.I.B.A. and have had experience in the design and development of school buildings.

Applicants for post (c) must have passed the Intermediate R.I.B.A. examination or its equivalent at a recognised School of Architecture.

Applications should be made on a form to be obtained from and returned to the Borough Engineer and Surveyor, Town Hall, Ilford, forgether with conies of not more than three recent testimonals, within 14 days of the appearance of this advertisement.

CITY AND ROYAL BURGH OF

CITY AND ROYAL BURGH OF

CITY AND ROYAL BURGH OF

DUNFERMLINE

APPLICATIONS are invited for the post of

TEMPORARY PLANNING ASSISTANT on
salary scale A.P.T. IV-V (£705-£320 per annum)
with placing according to qualifications and
experience.

with placing according to qualifications and experience.

Preference will be given to Associate Members of the Institute of Town Planning.

Particulars of appointment, and forms of application may be obtained from the Burgh Architect, 6, Abbot Street, Dunfermilne, to whom applications should be returned by Monday, 8th September, 1958.

Applicants must disclose in writing whether to their knowledge they are related to any Member or Senior Officer of the Town Council, and canvassing either directly or indirectly will be a disqualification.

J. DOUGLAS, Town Clerk.

City Chambers, Dunfermline. 11th August, 1958 HOLLAND C

HOLLAND COUNTY COUNCIL invite appointment of an ASSISTANT ARCHITECT—Special Grade £750-

ASSISTANT ARCHITECT—Special Grade £750-£1030 per annum.

The appointment will be subject to the nrovisions of the Local Government Superannuation Acts, the N.J.C. Scheme of Conditions of Service and a medical examination. The Council are prepared to contribute to the cost of removal.

Forms obtainable from the County Architect, should be returned to the Clerk of the County Council. County Hall, Boston, Lines, by 3rd September. 1958.

Council. County Hall, Boston, Marco, September, 1958.

DURHAM COUNTY COUNCIL Architect's Department.

ARCHITECTURAL ASSISTANTS — Salaries APT 1 (£575—£725), APT II (£725—£845), APT III (£845—£1.025). Special Grade £750—£1.030) and APT IV (£1.025—£1.175). Forms and further particulars from the County Architect, South Street, Durham. Closing date 27th August, 1958. Canvassing members of the Council is prohibited.

J. K. HOPE.

Clerk of the County Council. 1214

ROYAL BOROUGH OF KINGSTON-UPONAppointment of FIRST ARCHITECTURAL
ASSISTANT. Special Scale 2750 × £40 to £1,030.
Commencing at £960 per annum plus London
Weighting. Applicants must be qualified and
capable of supervising the work of assistants
under the direction of the Chief Architectural
Assistant. Application forms and further details
obtainable from the Borough Surveyor, Gulldhall, Kingston-upon-Thames, and returnable by
September 6.

A. B. ROGERS,

A. B. ROGERS, Town Clerk.

Guildhall, Kingston-upon-Thames. August 13, 1958.

Kingston-upon-Thames.

August 13, 1958.

EAST KILBRIDE DEVELOPMENT
CORPORATION

Applications are invited for the undernoted posts within the Planning section of the staff of the Chief Architect and Planning Officer of the Corporation:

(1) ARCHITECTY/PLANNER — Salary scale £844/£1,146 per annum. Applicants must be R.I.B.A., M.T.P.I., and have at least 2 years' qualified experience.

(2) ASST. ARCHITECT/PLANNER — Salary scale £679,£811 per annum.
Applicants must have at least passed the Intermediate Examination of the R.I.B.A. or T.P.I. The work will involve preparation of residential layouts, Village redevelopment, Town Centre development, and Open Space proposals.

The commencing salary will be in accordance with qualifications, experience, etc. Appointment is subject to the Corporation's conditions of service, and Superannuation Agreement: Medical Examination. A house or flat will be made available if required. Application Forms from the General Manager, Torrance House, East Kilbride, to whom they should be returned not later than August 30, 1952.

Canvassing, directly or indirectly, of the members of the Corporation will constitute an absolute disqualification.

1182

METROPOLITAN BOROUGH OF LAMBETH

members of the Corporation will constitute an absolute disqualification.

METROPOLITAN BOROUGH OF LAMBETH ARCHITECTURAL STAFF
Applications invited from suitably qualified and experienced persons to assist in large programme of conversion and improvement of dwelling houses. Duties: surveys of existing properties, preparing of working drawings and specifications and supervision of works in progress, final accounts, etc. Appointment will be on a temporary basis, extending possibly to two to three years. Applications will be considered from older members of the profession with experience of this type of work who may find it convenient to accept temporary work. Commencing salary according to qualifications and experience within the range of £875-£1.055 p.a.

Full details of experience and qualifications should be forwarded to the Town Clerk, Lambeth Town Hall, Brixton Hill, S.W.2 (quote No. 57b).

SOUTH EASTERN ELECTRICITY BOARD SENIOR ARCHITECTURAL ASSISTANT, Surveyor's Section, Headquarters. Salary 2855-2930 under NJC Grade 5. Applications are invited from Registered Architects with experience in the oreparation of schemes including showrooms, offices, stores and garages. Preference to applicants who are Associates of the R.I.B.A. or I.A.A.S. The post is superannuable. Applications, naming two referees, to Surveyor, Seeboard. 10, Queen's Gardens, Hove 3, by September 3, 1958.

GEORGE WRAY, Secretary, 1219

COUNTY BOROUGH OF CROYDON
ARCHITECTURAL ASSISTANT
Applications are invited for this appointment
under a team leader on Corporation housing
schemes. including multi-storey flats.
Candidates should have reached about the
standard of the R.I.B.A. infermediate examinations.

standard of the R.I.B.A. Intermediate examina-tions.

Commencing salary between £605 and £875 p.a., according to qualifications and experience. Scale rises to £1,060 p.a. subject to passing R.I.B.A. final examination.

Further particulars and application form from Borough Engineer, Town Hall, Croydon.

Closing date 9th September, 1958.

E. TABERNER.

Town Clerk.

2117

LONDON COUNTY COUNCIL ARCHITECT'S DEPARTMENT Vacancies for: (1) ARCHITECTS, Grade III, starting salary up to £1,090 a year. (2) ARCHI-TECTURAL ASSISTANTS, starting salary up to

APPOINTM One-A.P. Establishe

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Application able to Bollall, Wenn

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starting salary up to £1,990 a year. (2) AROHITECTURAL ASSISTANTS, starting salary up to £369.
Full and interesting programme of homese, flate, schools and general buildings.
Application form and full particulars from flubert Bennett, F.R.I.B.A., Architect to the Council, the County Hall, S.E.I, quoting ref. AR/EK/5/93. (1428)

THURROCK U.D.C. (Engineer and Surveyor', Dept.) require ARCHITECTURAL ASSISTANT Salary—A.P.T. I/II: £575—2845 D.a. Good architectural experience is necessary. Applicants must be capable of preparing working drawings in all categories and should have passed the Intermediate Examination of the R.I.B.A. The Council ave interesting projects in hand, including an Indoor Swimming Bath. Appointment pension, able. Applications, stating age, qualifications, and experience, and quoting three referees, to the Clerk of the Council Officers, or Senior Officers of the Council must be disclosed. His Officers of the Council must be disclosed. His Council of the Clerk of the Council must be disclosed. His ARCHITECT'S DEPARTMENT Vacancy in Historic Buildings Section for an ARCHITECT'S DEPARTMENT Vacancy in Historic Buildings Section for an ARCHITECT'S DEPARTMENT Vacancy in Historic Buildings Section for an ARCHITECT'S DEPARTMENT Vacancy in Historic Buildings Section for an ARCHITECT'S DEPARTMENT Vacancy in Historic Buildings Section for an ARCHITECT'S DEPARTMENT Vacancy in Historic Buildings Section for an ARCHITECT'S DEPARTMENT Vacancy in Historic Buildings Section for ARCHITECT'S DEPARTMENT Va

BOROUGH OF EDMONTON
BOROUGH ARCHITECT'S DEPARTMENT
JUNIOR ARCHITECTURAL ASSISTANT
(temporary) required. Candidates should be about 18-20 years of age and have achieved some progress in their studies for professional qualification. Excellent opportunity of gaining valuable experience in a Borough Architect's drawing office dealing with all aspects of building. Salary on Higher/General grade rising to £550 plus London weighting with opportunities for prometion.

London weighting with a control of the control of t

Applications on forms obtainable from Town Clerk, Town Hall, Edmonton, must be delivered by August 29.

Applications invited for appointment of either (1) ASSISTANT ENTATES SURVEYOR within Grade 2750 × 240-21.050. Final Exam. E.A.A.S. (Building) plus 5 years related experience, or Final R.I.C.S. (Building or Valuation).

(2) ENTATES SURVEYING ASSISTANT within Grade 4575 × 250-4725. Final I.A.A.S. (Building) or Inter. R.I.C.S. (Building or Valuation); or 2725 × 250-4245. plus adequate experience.

Superannuable posts. Medical examination. Municipal experience not essential.

Particulars to City Architect and Estate Manager, Suffolk House, Greyfriars, Gloucester, without delay.

COUNTY BOROUGH OF SMETHWICK BOROUGH ENGINEER & SURVEYOR'S DEPARTMENT ARCHITECT

Applications from persons suitably qualified are invited for the above appointment—Salary 21.65-21.75 per annum. The commencing salary will be according to the qualifications and experience of the successful applicant.

The post is subject to the provisions of the National Scheme of Conditions of Service, the Local Government Superannuation Acts 1937-53; the passing of a medical examination and to termination by one month's notice on either side.

Application forms may be obtained from the Roponech Engineer & Surveyor Council House.

Application forms may be obtained from the Borough Engineer & Surveyor, Council House. Smethwick, and should be returned. in envelopes suitably endorsed, not later than 15th September.

E. L. TWYCROSS. Town Clerk.

Council House. Smethwick. 40. August, 1958.

1188

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Established appointments. Full and varied programme of work. Housing accommodation not Betablished appointment of work. Housing accommendation of work. Housing accommendation of work. Housing accommendation of work of work of the september of the september of the work of the september of th

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fem preliminary details. Five-day week in operaties. Applications stating age, experience, qualifications and salary required to G. S. Hay,
ABLBA, Chief Architect, Co-operative Wholesile Society, Ltd., 1, Balloon Street, Manchester, 4.

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ONALD WARD & PARTNERS require ARCHITECTURAL ASSISTANTS with militative. Salary range £600 to £900. Congenial waking conditions. Five-day week. Apply: 29, besham Place, Belgrave Square, S.W.1. Telephase: Belgravia 3361.

Chantam Place Belgiave Square, S. W.L. Peterbane: Applicants must be capable draughtsmen, ask to make surveys, produce working drawings and details. Must be used to working in a provincial office. Apply in writing, stating experience and salary required, to Box 1097.

SENIOR and INTERMEDIATE ASSISTANTS required immediately with experience in private practices for full and interesting programme in medium sized office. Full particulars and salary required to Deacon & Laing, Chartered Architects, 65, Goldington Road, Bedford. 11116

Architects, 65, Goldington Road, Bedford, 1116

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Architecty, 1117

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RAMSEY, MURRAY, WHITE & WARD require qualified ASSISTANTS for large-scare industrial programme. Good draughtsman-ship essential. Saiary according to age and experience. Reply Ref. 309, 32, Wigmore Street, W.L.

W.I.

A RCHITECTURAL ASSISTANT required for busy West End Office. Salary according to age and experience. Apply, in writing, to Maurice Sanders, F.R.I.B.A., 24, Harley Street, W.I.

W.1.

INTERMEDIATE approaching Finals, ASSISTANTS required at once. Varied practice; 5-day week; salary by arrangement. Write brief details to Musman & Cousens, 12, Upper Berkeley Street, London, W.1.

EXPERIENCED A R C H I T E C T U R A L ASSISTANT required. Reply, stating age, qualifications and salary required, to J. L Heap, A.R.I.B.A., George Calverley & Sons (Contractors) Ltd., Evington Valley Road, Leicester.

ARIBA. George Calverley & Sons (Contractors) Ltd., Evington Valley Road, Leicester.

1225

RCHITECTURAL ASSISTANTS urgently required to staff proposed new offices. Fiveday week, overtime available at basic rates. Applicants must be capable and experienced. Salaries according to ability. Telephone KNI. 1904 for appointment. 1203

RCHITECTURAL ASSISTANTS, Intermediate and Final Standard, required for Coventry and Manchester offices. Excellent opportunities in varied practice covering wide area. Good salaries, closely related to capabilities and reviewed annually. Pension Scheme available. Five-day week. Travelling expenses to applicants selected for interview. W. S. Hattrell & Partners, I. Queens Road, Coventry—60668 and 15, Piccadilly, Manchester, 1—Deansgate 8288. 1193

RCHITECTS in Midlands require QUALIATION. ACCOUNT SALARY STATEMEDIATE Standard ASSISTANT required in London Office. Reply stating age, experience and salary required. Apply Box 1209.

TWO SENIOR ASSISTANTS are required by leading Timber Engineers. One appointment will be in Lincoln, and the other either in Lincoln or London.

The successful applicants will handle timber structural roofing and curtain walling projects from Design to Working Drawing Stage and be required to liaise with Architects. The nature of the work calls for sound experience in building construction, and ability to work without supervision.

The salary range, on appointment, is within the bracket 2750-2850, the commencing salary being determined by ability and experience. Consideration will be given to removal expenses. A contributory superannuation scheme is in operation.

Consideration will be given to related to the contributory superannuation scheme is in operation.

Apply to H. Newsum. Sons & Co. Ltd., 238, High Street, Lincoln, giving full details of previous experience.

2201

ARCHITECTURAL ASSISTANTS of near in busy clivy of London firm with wide General Practice. Good Salary, Luncheon Vouchers, Pension Scheme. Apply Box No. 1200.

EXPERIENCED ASSISTANT required by Staff Architect to Property Holding and Development Companies: Shop and Flat schemes, Estate layout and Housing, Offices, Flats, alterations, etc., should be able to deal with projects from sketches to final account including all drawings, Local Authority and T.P. interviews. West End. Salary £800-£900, according to experience and qualifications. Box 1189.

A SSISTANTS required for Commercial and Industrial work; excellent working conditions, lunch facilities. Salary around £850. Apply in writing to Alan A. Briggs, F.R.I.B.A., 10, Fleet Street, London, E.C.4.

SMALL ARCHITECTS' OFFICE in Victoria, S.W.I., requires ASSISTANT capable of preparing complete drawings and specifications for all types of medium size contracts. Starting salary £600 approximately. Apply Box 1223.

BUCKINGHAMSHIRE firm of Architects within 30 miles of London with a varied practice, require an ARCHITECTURAL ASSISTANT at Final R.I.B.A. Standard. Five-day week. Salary according to age and experience. Please write giving full particulars to Box 1202.

**ARCHITECTURAL ASSISTANT required near Redhill, part or full-time; experienced draughtsman; interesting domestic work. Box 1211.

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A. S. Col. A. A. A. Dipl., aged 32. now Senior Assistant with seven years' experience in London private practice. The London private practice in the West Country. Reply Box 1233.

S. S. Col. A. A. A. Dipl., aged 32. now Senior Assistant with seven years' experience in both fields and general office administration, seeks senior appointment. Preference for London Area. Box 1226.

A. S. S. Col. A. A. A. Dipl., aged 32. now Senior Assistant with seven years' experience in London private practice, seeks post with prospects in the West Country. Reply Box 1231.

ENSINGTON or near. School trained WOMAN ARCHITECT with five years London experience seeks interesting work, preferably in a small office. Box 1195.

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THE ARCHITECTS' JOURNAL requires a
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for the preparation of Working Details and Information Sheets. Write to the Editor (Information Sheets, 9, Queen Anne's Gate, S.W.), stating
age, architectural training and experience. 919

K ING'S COLLEGE HOSPITAL, Denmark
Hill, S.E. 5.—Applications are invited for the
post of SECRETARY to the Building Surveyor.
Preferably candidates should have had previous
experience of work in a surveyor's or architect's
office, although this is not essential. The salary
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2381 per annum, at 21 2446 per annum, at 23 or
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Applications, stating age, education and previous
experience, together with the names and
addresses of two referees, should be sent to the
undersigned by Thursday 28th August. S. W.
Barnes, House Governor.

127

CO-OPERATIVE WHOLESALE SOCIETY
C.TD. Architect's Department, London.
WORKER-UP. Applications are invited from
suitably qualified and experienced persons. Salary
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The post is superannuable, subject to medical
examination. Five-day week in operation. Applications, stating age, experience, qualifications
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Chief Architect, Cooperative Wholesale Society
Ltd., 99, Leman Street, London, E.L. 1204

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A RCHITECT (B.A.(Arch.) F.B.I.B.A.) seeks
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Would be particularly interested in London or
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A ECHITECTURAL METALWORK of all

A RCHITECTURAL METALWORK of types supplied and fitted. Gates, doors, balustrades, staircases, steel structures. Design staff available.—Clayton & Bamber, Ltd., Carterafield Boad, Waltham Abbey, Essex. 5823

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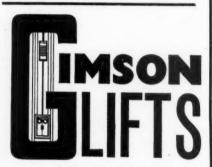
TUITION—Correspondence and Personal Tuition given for the R.I.B.A., Institute of Builders and Clerk of Works Institute Examinations, also in all aspects of Building, Engineering and Draughtsmanship. C. W. Box, F.R.I.B.A., 115. Gower Street, W.C.1. Euston 3906.

UNIVERSITY OF MANCHESTER
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October 2, 1958.

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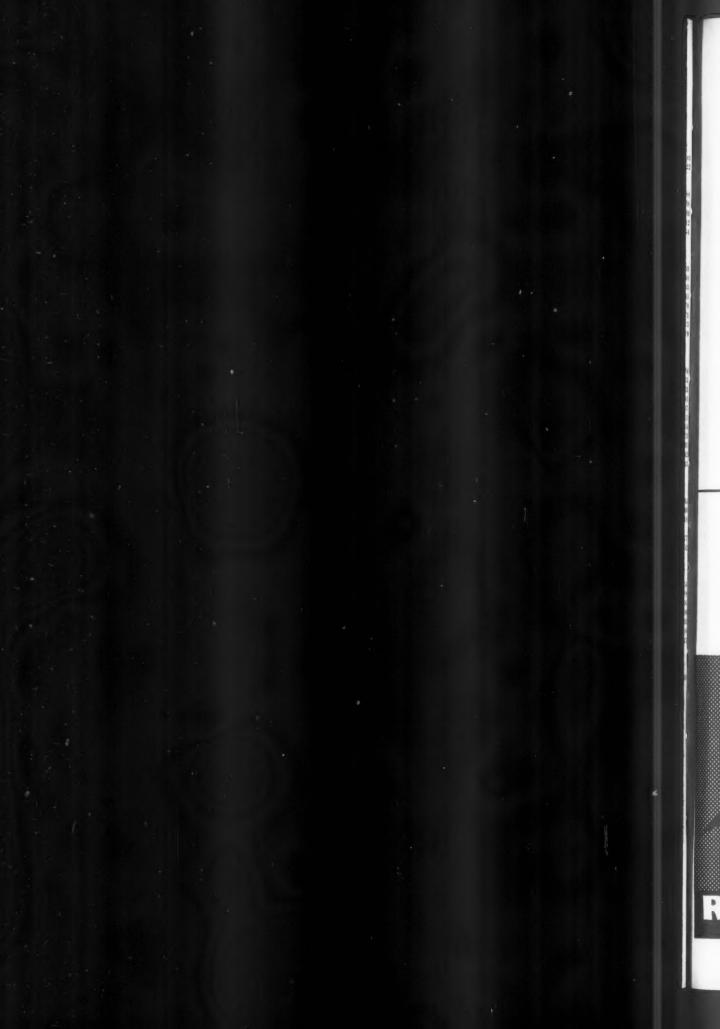
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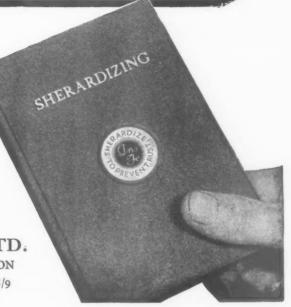
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